Course Descriptions

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Courses of Instruction
This section lists courses of instruction alphabetically by subject.

Writing Intensive Courses
The College offers a series of writing intensive courses in which students engage in formal and informal writing assignments totaling a minimum of 4,000 words. Students strengthen writing skills as well as learn course content and understand how to apply what they learn through writing. Students also satisfy degree requirements at the College (two required for the AA degree), and at UH Manoa (a minimum of five writing-intensive classes required). The Schedule of Classes designates writing intensive courses by WI in the course title (e.g., HIST 284 WI-Hawaiian History).

Course Credit
One credit is assigned to a course for one or more hours per week of class time during a typical 15-week semester. This time may be assigned to lecture, discussion, or lab instruction.

The credit value of each course is indicated by a number at the end of each course description. For example, “3cr.” indicates the course carries three credits; “3,3” indicates each module “BC” of the course carries three units of credit.

Following the credits is a number indicating the contact hours per week of lecture, discussion, or laboratory (e.g., “3hr. lect.” means the course meets three hours per week in a lecture format). Course modules indicate “in-class” minimums (e.g., 15hr. lect. per semester).

Methods of Instruction
The College presents courses in a variety of modes, including traditional classroom settings. The Individualized Study mode allows students to study independently with the assistance of an instructor. Internet classes are those where course materials and assignments are presented over the World Wide Web. Televised courses are offered in several ways. The Hawai‘i Interactive Television System (HITS) offers live interaction among classrooms in Hana, Kahului, Kihei, Lahaina, Lana‘i, Molokai, and throughout the state. Cable courses are broadcast over the college channel to cable subscribers. The Schedule of Classes designates these classes.

Terminology: Prereq, Coreq, Recommended, Consent
Prerequisite (Prereq): Course that must be satisfactorily completed or competency that must be met before the student can enroll in the desired course.
Corequisite (Coreq): Course that the student must take concurrently with the desired course.
Recommended: Course or competency that will help the student succeed in the desired course or program.
Consent: Term used in a prerequisite, meaning consent to enter the course must be given by the instructor, department chair, program coordinator, or other authorized designee.

Numbering System
Courses generally not transferable to four-year colleges but transferable within the UHCC System ............. 10-99
Lower Division Courses
Transfer level courses normally taken by freshmen..................... 100-199
Transfer level courses normally taken by sophomores, open to qualified freshmen ..................... 200-299
Upper Division Courses
Junior ............................................. 300-399
Senior ........................................... 400-499

Prerequisite Checking
The Banner computer registration system checks transcripts to assess whether students have met the prerequisite course, grade, or score. Banner allows students to register for a course only when their transcript shows a prerequisite is met.

There are several exemptions: prerequisites in progress; prerequisites completed at an institution outside the UH Community College system (see a counselor about transferring prerequisites that were completed outside the system into the College Banner database); or petitioning an exemption through Consent of Instructor. Students without the published prerequisite cannot register for the course using the MyUH online registration. All non-UH system courses must be transferred, articulated, and input into theBanner system before electronic checks can occur.

See a counselor regarding transcript evaluations, or call for an appointment at 984-3306.

Codes for AA Degree Requirements
The following codes are category designations for AA Requirements (pages 15-16) and Course Descriptions (pages 85-134).
FW Foundations Writing
FG Foundations Global
FS Foundations Symbolic
FN Foundations Numeracy
FO Foundations Oral
FI Foundations Information Retrieval
IN Individual (Human Understanding)
CO Community (Human Understanding)
CG Community Global Perspective (Human Understanding
HE Human Expression
EA Environmental Awareness
EG Environmental Awareness (Global)
EL Environmental Awareness Lab (course satisfies the Lab requirement)
AP Asia Pacific requirement
HI Hawai‘i Emphasis requirement
Accounting (ACC)
D. Grooms, R. Klein, D. Meyer, J. Moore

124 Principles of Accounting I
Prereq: ENG 19 with grade C or better or placement at least ENG 22 or 55, and MATH 1 or placement at least MATH 22; or consent.
Introduces basic accounting principles and practices, including the accounting cycle, use of the general and special journals, general ledgers, financial statements, banking transactions, payroll accounting, and adjusting and closing entries for merchandise inventory. 3cr., 3hr. lect.

125 Principles of Accounting II
Prereq: ACC 124, and MATH 22 with grade C or better or placement at least MATH 23; or consent.
Introduces basic accounting principles and practices, including internal controls cash budgets, receivables and payables, plant and equipment. Analyzes methods of valuing assets, liabilities, and ownership of an organization. 3cr., 3hr. lect.

132 Payroll & Hawai’i General Excise Taxes
Prereq or coreq: ACC 124 or ACC 201, or consent.
Introduces principles, procedures, and terminology for business applications of payroll methods. Emphasizes federal and state payroll records and forms. Introduces Hawai’i general excise and use tax law and procedures under the law. 3cr., 3hr. lect.

134 Income Tax Preparation
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Introduces principles, procedures, terminology, and applications of the Federal income tax law for individuals with comparison to Hawai’i individual income tax law. 3cr., 3hr. lect.

137 Business Income Taxation
Prereq: ACC 134, or consent.
Studies federal and Hawai’i state income taxes with a brief review of personal income tax followed by in-depth study of self-employment, partnership, and corporate tax returns as well as withholding and estimated taxes. 3cr., 3hr. lect.

150 Accounting Using QuickBooks®
Prereq: ACC 125 (or concurrent) or ACC 201, or consent.
Provides realistic hands-on approach to computerized accounting. Applies previously acquired accounting skills and knowledge to set up and maintain accounting records on the computer using a commercial software accounting package. Emphasizes journal entries, general ledger, accounts receivable and payable, and payroll. 3cr., 3hr. lect.

155 Using Spreadsheets in Accounting
Prereq: ACC 125 (or concurrent) or ACC 201, or consent.
Provides intensive training in the use of spreadsheets on microcomputers for the accounting profession. Emphasizes financial and managerial accounting applications. 3cr., 3hr. lect.

201 Introduction to Financial Accounting
Prereq: ENG 22 with grade C or better or placement at ENG 100, and MATH 23 with grade C or better or placement at least MATH 25; or consent.
Introduces accounting theory and methods used to record and report financial information. Analyzes methods of valuing assets, liabilities, and ownership of an organization. 3cr., 3hr. lect.

202 Introduction to Managerial Accounting
Prereq: ACC 124 and 125, or ACC 201; or consent.
Introduces methods for evaluating financial performance, including cost accounting, budget, break-even analysis, ratio analysis, and sources and uses of funds. 3cr., 3hr. lect.

295 Accounting Capstone
Prereq: ACC 132, 134, 150, 155 (concurrent), and 202; or consent.
Provides an opportunity to demonstrate the tools and understanding developed during the accounting program. Includes financial, managerial, payroll accounting and income tax preparation. Includes the use of computers. Emphasizes the use of ethics in business decisions. (Letter grade only.) 3cr., 3hr. lect.

Intermediate Financial Accounting I
Prereq: ACC 202, or consent.
Emphasizes the application of generally accepted accounting principles to the preparation and use of financial statements in decision-making. Special emphasis placed on recognition and measurement of revenues, cash, receivables, inventories, property, plant and equipment, depreciation and depletion, and intangibles. Includes use of spreadsheets. 3cr., 3hr. lect.

Administration of Justice (AJ)
R. Daniels

101 Introduction to Administration of Justice
Examines history and philosophy of the administration of justice in United States with overview of major sub-systems within the criminal justice system: law enforcement, courts, and corrections. Examines expectations and interrelationships of officials, theories of crime, punishment, and rehabilitation. Surveys career opportunities. 3cr., 3hr. lect.

103 Criminal Investigation
Prereq: AJ 101, or consent.
Introduces initial investigatory steps relating to crime scenes. Acquaints student with specific offenses and methods of obtaining information. 3cr., 3hr. lect.

104 Criminalistics
Prereq: AJ 103, or consent.
Emphasizes identification and reproduction of physical evidence. Studies specialized scientific methods and their relationship to court procedures. 3cr., 3hr. lect.

150 The Correctional Process
Introduces the field of corrections. Includes the history and philosophy of punishment and methods used to protect society and rehabilitate the offender. 3cr., 3hr. lect.
170 Introduction to Private Security
Surveys concepts and issues in the administration of security. Defines public vs. private security roles for retail business, industry, and governmental agencies. Provides an overview of the functions of various security activities. 3cr., 3hr. lect.

200 Principles of the Hawai‘i Justice System
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Reviews criminal justice systems in the United States, with special emphasis on Hawai‘i. Analyzes law enforcement and the judicial and corrections procedures from time of arrest until final disposition of the case. Studies federal and state laws and constitutional principles through legal research. 3cr., 3hr. lect.

210 Juvenile Justice
Prereq: AJ 101, and ENG 22 or 55 with grade C or better or placement at ENG 100; or consent.
Studies principles and procedures of arrest, detention, petition, summons, records and adjudication of juvenile offenders. Introduces organization and function of the police juvenile unit, community diversion practices, and organization of the Family Court. Reviews Hawai‘i’s statutes and United States Supreme Court decisions affecting juvenile rights of due process. Considers societal context of juvenile problems, delinquency prevention, and treatment. (Crosslisted at SOC 231.) 3cr., 3hr. lect. (CO)

221 Criminal Law
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Studies history and philosophy of criminal law. Examines United States Constitution, especially the Bill of Rights. Considers nature of law, legal institutions, criminal court procedures, offenses against persons and property. Includes case briefs. 3cr., 3hr. lect.

223 Laws of Arrest, Search, Seizure
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Analyzes statutes and cases pertaining to the problems and procedures in effecting valid arrests, searches, and seizures. Considers Hawai‘i Supreme Court decisions and controlling opinions of the United States Supreme Court. 3cr., 3hr. lect.

224 Rules of Evidence
Considers origin, development, philosophy, kinds and degrees of evidence. Surveys pertinent federal constitutional amendments, landmark Supreme Court decisions affecting the admissibility of evidence, and changes in Federal and Hawai‘i case law. Case briefs. 3cr., 3hr. lect.

226 Economic Crimes
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Provides information about major economic crimes such as embezzlement, computer crime, and others. Discusses investigative techniques relating to each of the major economic crimes. 3cr., 3hr. lect.

230 Principles of Police Supervision
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Analyzes supervisor’s function and principles of organization and personnel management. Stresses communication, training, disciplines, psychology of supervision, essentials of leadership, promotion methods, and selection of supervisors. 3cr., 3hr. lect.

231 Stress in Policing
Surveys major sources of stress in police work and effects of stress on the officer. Considers stress management programs. 3cr., 3hr. lect.

232 Officer Survival
Emphasizes positive tactics police officers can employ to effectively use their own firearms to defeat those of assailants. Teaches techniques that work for survival in real-life situations. 3cr., 3hr. lect.

234 Police-Community Relations
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Examines philosophies and styles of policing. Encourages effort of the police and community to share in the common goal of understanding mutual problems. 3cr., 3hr. lect.

240 Hawaiian Cultural & Natural Resources Management
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Recommended: AJ 101; and COM 145, COM 130/BUS 130, or SP 151.
Provides a background for onsite management of Native Hawaiian cultural and natural resources. Relates traditional Native Hawaiian resource conservation practices to current governmental policies, rules, and regulations. Introduces duties and responsibilities of conservation and resource enforcement officers. 3cr., 3hr. lect.

250 Community Based Corrections
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Explores juvenile and adult probation, after-care parole, halfway houses, work and educational release-furlough. Examines dilemma of custody-control vs. supervision-treatment. Investigates citizen-agency relationships, along with potentials for utilizing citizen volunteers in corrections. 3cr., 3hr. lect.

270 Principles of Loss Prevention
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Considers various theories of managing security countermeasures. Acquaints students with loss prevention measures for retail businesses, government agencies, hotels and motels, hospitals, schools, and other organizations. 3cr., 3hr. lect.

293v Administration of Justice Internship
Prereq: AJ 101 with grade C or better, or consent.
Offers flexible, customized, supervised school-to-work experiences in all aspects of the administration of justice field. Integrates and applies classroom theory to work situations via field experiences. Student must complete a minimum of 75 hours per credit per semester. (Note: 3 credits are required for AAS degree. Student may take up to 6 additional credits.) 1-3cr., 75hrs./cr.
Agriculture (AG)

J. Boswell, A. Emmsley

92 Selected Topics in Agriculture
   O Landscape Plant Selection-Care
   P Pesticides & Safety
   Q Interiorscapes
   R Tropical Fruit & Nuts
   S Organic Gardening
   T Plant Breeding
   U Open Topic

Meets local interests in agriculture. Varies specific content for each topic to match job site or geographical needs and conditions. Credit in topics O and U are not applicable toward a degree in agriculture. Credit in topics P, Q, R, S, and T may be used for elective credit only. (AG 92U may be repeated without limit for credit.)

1cr., 1hr. lect./lab

101 Home Gardening
Introduces ornamental and vegetable gardening for the home gardener. Includes landscape installation and maintenance. Intended for non-majors.
3cr., 4hr. lect./lab

122 Soils Technology
Recommended: Placement at least ENG 22, and placement at least MATH 22; or consent. Studies identification, preparation, and fertilization of soils; amendments, sterilization, mulching, and composting methods. Includes soil testing, microbiology, and soil moisture. Emphasizes sustainable management systems.
3cr., 2hr. lect./2hr. lab

174 Insects & Their Control
Recommended: Placement at least ENG 22, and placement at least MATH 22; or consent. Introduces basic morphology and classification of insects. Studies destructive and beneficial insects. Covers principles of cultural, mechanical, legislative, biological, and chemical control. Investigates sustainability of control methods.
3cr., 2hr. lect./2hr. lab

194v Turfgrass Work Practicum
Prereq: AG 233 and Agriculture major and consent. Recommended: AG 260. Provides supervised work experience in turfgrass management. Students are actively involved in all phases of turfgrass maintenance. Daily work log, confirmed by supervisor, and periodic scheduled meetings with instructor are required. (May be repeated for a maximum of 3 credits.)
1-3cr., 5-15hr. lab

200 Principles of Horticulture
Introduces botany and plant physiology. Discusses plant nutrient, moisture, and environmental requirements. Treats plant propagation. Studies culture and production techniques for selected ornamental crops. 4cr., 3hr. lect./2hr. lab (EA, EG, EL)

201 Introduction to Plant Disease
Recommended: Placement at least ENG 22, and placement at least MATH 22; or consent. Introduces classification, morphology, and biology of fungi, bacteria, viruses, and nematodes that attack economic crops. Covers diagnosis and control of plant diseases. Investigates sustainability of control methods.
3cr., 2hr. lect./2hr. lab

230 Agricultural Business Management
Recommended: Placement at least ENG 22, and placement at least MATH 22; or consent. Introduces farm and landscape management practices including decision making, record keeping, cash flow, financial statements, ratio analysis, use of computers as a management tool, and marketing of agricultural products and services.
3cr., 3hr. lect.

232 Farm Tractor & Equipment Operation
Prereq: Consent.
Teaches operation of a rototiller and wheel type tractor with allied implements on the College farm. Includes safety, maintenance, three point hitch hookups, hydraulics, and field adjustments.
1cr., 3hr. lab

233 Turfgrass Equipment, Operation & Maintenance
Prereq: Turfgrass Specialist Certificate, or consent.
Teaches the operation and maintenance of greens mower, aerator, fairway mower, sprayer, and other turf maintenance equipment. Includes safety.
2cr., 3hr. lect./lab

235 Irrigation Principles & Design
Recommended: Placement at least ENG 22, and placement at least MATH 22; or consent. Teaches types of irrigation systems including materials, equipment, design, and installation. Discusses evapotranspiration and soil moisture relations.
3cr., 2hr. lect./2hr. lab

250 Tropical Landscape Horticulture
Recommended: Placement at least ENG 22, and placement at least MATH 22; or consent. Introduces design, construction, installation, care, and maintenance of landscapes. Requires a landscaping project, drawn and installed.
4cr., 2hr. lect./4hr. lab (EA, EL)

251 Sustainable Crop Production
Recommended: Placement at least ENG 22, and placement at least MATH 22; or consent. Introduces production methods for selected crops including propagation, planting, fertilization, irrigation, pest control, harvesting, and marketing. Evaluates conventional and alternative methods of production and analyzes effects of these practices. Examines economic and social impacts. Field trips to production areas.
4cr., 2hr. lect./6hr. lab
260 Turfgrass Management
Recommended: Placement at ENG 100, and placement at least MATH 22; or consent.
Studies identification, planting, and maintenance of turfgrasses for home, park, and golf areas. Discusses watering and fertilizing. Treats insect, disease, and weed control. 3cr., 2hr. lect./2hr. lab

263 Flower & Foliage Crop Production
Prereq: AG 200, or consent.
Recommended: AG 266.
Introduces production of cut flowers and foliage, and flowering pot plants, under field and protected cultivation in Hawai‘i. 3cr., 2hr. lect./2hr. lab

264 Plant Propagation
Prereq: AG 200, or consent.
Introduces theoretical and applied aspects of sexual and asexual reproduction of plants. Propagation of selected plants by seed, cuttings, grafting, budding, layering; and division. 3cr., 2hr. lect./2hr. lab

265 Horticulture of Hawaiian Plants
Prereq: BOT 105 with grade C or better, or consent. Recommended: AG 200.
Explores the biology, ecology, and adaptations of plants focusing on endemic and indigenous Hawaiian and Polynesian introduced. Teaches techniques of horticulture including propagation, cultivation, and management. Introduces uses of the plants in landscaping and native habitat restoration projects. 4cr., 6hr. lect./lab (EA, EL, HI)

266 Greenhouse & Nursery Management
Recommended: Placement at least ENG 22, and placement at least MATH 22; or consent.
Introduces management practices for production and operation of nurseries and greenhouses in Hawai‘i. Includes environmental factors, structures, materials, sanitation, pests, and diseases. 3cr., 2hr. lect./2hr. lab

269 Ornamental Plant Materials
Presents identification, use, propagation, and cultural requirements of trees, shrubs, vines, and ground covers used in Hawaiian landscapes. 3cr., 2hr. lect./2hr. lab

281 Weed Science
Recommended: Placement at least ENG 22, and placement at least MATH 22; or consent.
Teaches weed classification, identification, ecology, and principles of weed control. Emphasizes properties, uses, action, and safety of herbicides and pesticides. 3cr., 2hr. lect./2hr. lab

290 Agricultural Enterprise
Prereq: AG 230, AG 232 or equivalent, AG 250, and consent for ornamental crops.
Offers selection, management, and production of an agricultural project under faculty supervision. Requires three hours per week with faculty supervisor and additional time to grow a crop from soil or medium preparation. Student markets crop and maintains farming and financial records. (May be repeated for a maximum of 3 credits.) 1cr., 3hr. lab

Anthropology (ANTH)

150 Human Adaptation
K. Fletcher
Studies human evolution. Examines prehistoric and recent developments of culture and common features and principle variations in cultural behavior. 3cr., 3hr. lect.

165 Heritage Sites in Archaeology
Prereq: ENG 100 with grade C or better, or consent.
Introduces the concepts and practices of archeology, historical research, historic site preservation, and heritage management. Combines lecture, laboratory, and fieldwork. 3cr., 3hr. lect. (EA, HI)

200 Cultural Anthropology
K. Fletcher
Studies the concept of culture and basic tools for analyzing cultural behavior. Topics include patterning and integration, dynamics of culture, culture and the individual, cultural change, and anthropology and the future. 3cr., 3hr. lect. (CO, CG)

210 Archaeology
Recommended: ANTH 150 or 200 or 215.
Introduces prehistoric archaeology. Surveys cultural growth in prehistoric times. Explains methods and techniques of excavation and laboratory analysis. 3cr., 3hr. lect. (EA)

210L Archaeology Laboratory
Prereq: AG 210 with grade C or better (or concurrent); or consent.
Teaches methods and techniques of archaeological excavation. Uses laboratory techniques to analyze data. 1cr., 3hr. lab (EA, EL)

215 Physical Anthropology
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Introduces students to the study of human biological make-up, origins of that make-up, and the pre-history of human biological and cultural development. 3cr., 3hr. lect. (EA, EG, IN)

235 Peoples of the Pacific
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Recommended: HIST 152 or 153 or ANTH 200.
Surveys the cultural areas of the Pacific from pre-contact to present day. Covers prehistoric migrational patterns, historical movements, and present day distributions, including western colonization and current problems. (Crosslisted as HIST 288.) 3cr., 3hr. lect. (AP, CO)

Architectural Engineering & CAD Tech (AEC)

80 Basic Drafting
Recommended: ICS 101 or BUSN 150, and placement at ENG 100; or consent.
Provides basic instruction in blueprint reading and drafting. Covers manual drafting procedures and practices with an introduction to computer-aided drawing. Serves students preparing to be public school industrial arts teachers and those interested in a background in technical drawing. 3cr., 1hr. lect./4hr. lab
110 Basic AutoCAD
Prereq: AEC 80 or BLPR 22, or equivalent training/experience with consent.
Recommended: ICS 101 or BUSN 150, and placement at ENG 100.
Introduces the foundations of AutoCAD. Covers basic commands and operations from 2D drawing and editing to creating solid models and rendering. Teaches 2D drawing, text, dimensions, blocks, hatching, reference files, sharing data, 3D drawing, and plotting. Prepares students for Autodesk certification.
3cr., 6hr. lect./lab

112 Advanced Graphics
Prereq: AEC 114, or consent.
Provides experience in developing a modeling/drafting project entirely on the computer using the three-dimensional tools of CAD. Includes architectural models, rendering, and animation to create photo realistic computer images of buildings, components, and project sites.
3cr., 1hr. lect./4hr. lab

124 Civil Engineering Drawing
Prereq: AEC 110, and at least MATH 23 or 24 (or concurrent); or consent.
Introduces civil engineering drawing with AutoCAD. Explores maps, surveys, drawing scales and conventions, contours and profiles, site plans and plot plans, site utilities, topographic models, excavation, retaining walls, highway layout, and subdivision and block plans.
3cr., 1hr. lect./4hr. lab

127 Construction Materials
Prereq: AEC 110, or consent.
Provides a broad survey of materials and products used in the building industry, their nature, characteristics, variety, and uses. Includes concrete, masonry, wood, metals, conveying systems, electrical and mechanical systems, and other topics based on the CSI format. Emphasizes materials and construction in Hawai’i.
3cr., 3hr. lect.

114 Architectural Graphics
Recommended: ICS 101 or BUSN 150, and placement at ENG 100; or consent.
Introduces solid and spatial representation including: (a) orthographic and axonometric drawing, descriptive geometry, and shadow casting; (b) axonometric modeling, perspective modeling, and overlay drawings with entourage; (c) freehand drawing.
3cr., 1hr. lect./4hr. lab (HE)

118 Introduction to Fiber Arts
Prereq: AEC 110 and 118
Provides experience in the fundamentals of development and presentation of preliminary board designs. Covers architectural design concepts and principles, application of AutoCAD and ArchiCAD study models, rendering, and group and juried presentations.
3cr., 1hr. lect./4hr. lab

125 Introduction to 2D Design
Prereq: AEC 110, or consent.
Introduces the theory and practice of composing and arranging two-dimensional forms in black, white, and color through manipulation of the basic elements and their interrelationships. Meets the UH Manoa Arts & Science core requirement.
3cr., 2hr. lect./4hr. lab (HE)

105 Elementary Studio: Ceramics
Studies ceramic form. Emphasizes hand building, glazing techniques, and surface treatment. Involves lectures and projects. Meets the UH Manoa Arts & Science core requirement.
3cr., 6hr. lect./lab (HE)

107 Elementary Studio: Photography
Treats the camera as a tool of expression and black and white photography as a basic art form. Students required to supply own film, darkroom supplies, and camera capable of manual exposure adjustments. Meets UH Manoa Arts & Science core requirement. 3cr., 6hr. lect./lab (HE)

113 Introduction to Drawing
Emphasizes two-dimensional visualization and rendering of forms, spaces, and ideas through a variety of approaches and media. Meets the UH Manoa Arts & Science core requirement but not Art major requirement.
3cr., 6hr. lect./lab (HE)

J. Owen, M. Takemoto

101 Introduction to the Visual Arts
Introduces the basic elements of visual arts and their expressions in various forms. Meets the UH Manoa Arts & Science core requirement.
3cr., 3hr. lect. (CO, CG, HE)

103 Introduction to Fiber Arts
Requires studio projects and includes lectures in weaving, basketry, knotting, and crochet techniques.
3cr., 6hr. lect./lab (HE)

104 Elementary Studio: Printmaking
Recommended: ART 101.
Provides basic instruction in printmaking techniques. Introduces the elements and principles of design through use of the print medium. Covers these areas: relief printing, intaglio printing, serigraphy, monotypes, and collographs. Develops self-discipline through use of the medium and creative self-expression in the creation of a body of work.
3cr., 6hr. lect./lab (HE)
123B  Introduction to Water Color Painting
Introduces the theory and practice of watercolor painting. Includes basic materials and technical procedures. 1cr., 2hr. lect./lab (HE)

123C  Introduction to Oil Painting
Introduces the theory and practice of oil painting. Includes basic materials and technical procedures. 1cr., 2hr. lect./lab (HE)

123D  Introduction to Acrylic Painting
Introduces the theory and practice of acrylic painting. Includes basic materials and technical procedures. 1cr., 2hr. lect./lab (HE)

161  Introduction to Computer Graphics
Prereq or coreq: ICS 101 or BUSN 150, or consent.
Introduces computer graphics tools and concepts in digital image editing, illustration graphics, print and web design, and 2D and 3D animation. (Crosslisted as ICS 161.) 3cr., 3hr. lect. (HE)

170  History of Western Art
Surveys Western Art from prehistoric to modern times. Emphasizes the historical aspects of art including an overview of each historical period. Meets UH Mānoa Arts and Science core requirement. 3cr., 3hr. lect. (CO)

205  Photoshop and Illustrator
Prereq: ICS 101 or BUSN 150, or consent.
Introduces the basic tools and features of digital image editing, photo retouching, and color correction of images. Focuses on the fundamental drawing techniques of illustration graphics including pen tool paths, objects, and type. (Crosslisted as ICS 205.) 3cr., 3hr. lect./lab (HE)

218  Intermediate Computer Graphics
Prereq: ICS 161, 205, or 214; or consent.
Provides instruction with the tools and concepts of computer graphics utilizing digital media image digital image editing, illustration graphics, print publishing, web authoring, and 2D and 3D animation. (Crosslisted as ICS 261.) 3cr., 3hr. lect./lab (HE)

221  Fundamentals of Design for Print and Web
Prereq: ICS 101 or BUSN 150, or consent.
Introduces development principles related to graphic design terminology, tools and media, and layout and design concepts. Topics include integration of type, images, and other design elements, developing computer skills in industry standard computer programs, and study of design development pertaining to color theories, publications, and advertising. Projects emphasize relating form to content through selection, creation and integration of typographic, digital imaging, illustrative and design elements in print and web environments. (Crosslisted as ICS 214.) 3cr., 3hr. lect./lab (HE)

223  Intermediate Painting
Prereq: ART 113 and ART 123BCD; or consent.
Practices the development of painting skills following the chronological progression of Western Modernism. Explores painting work by studying the foundations of major developments in the late 19th century and early 20th century painting styles. Examines and compares the two parallel tendencies of Structuralism and Expressionism. Teaches control and management of pictorial space and paint application. Develops personal sources of imagery, and explores the effects of scale and color interaction in personal work. 3cr., 6hr. lect./lab (HE)

243  Intermediate Ceramics: Hand Building
Prereq: ART 105, or consent.
Develops vessel and sculptural concepts using hand-building techniques. Introduces the elements of art through the making of ceramic form. Progresses beyond basic hand building techniques to advanced skills: various forming and embellishing techniques, work with plaster and molds, colored slip, colored clay, glaze work, and the firing of kilns. Students work towards development of individual creative expression. 3cr., 2hr. lect./4hr. lab (HE)

244  Intermediate Ceramics: Wheel Throwing
Prereq: ART 105, or consent.
Develops vessel and sculptural concepts using wheel-throwing techniques. Introduces the elements of art through the making of ceramic form. Progresses beyond basic throwing techniques to intermediate throwing skills, various forming and embellishing techniques both on the wheel and subsequent to throwing, colored slip work, glaze work, and the firing of kilns. Students work towards development of individual creative expression. 3cr., 2hr. lect./4hr. lab (HE)

Astronomy (ASTR)

J. Pye

110  Survey of Astronomy
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, and MATH 1 with grade C or better or placement at least MATH 22; or consent.
Introduces the history and methods of astronomy, with descriptive treatments of planets, the solar system, stars, galaxies, and cosmology. Discusses the concepts of size, distance, and time in the observable universe. 3cr., 3hr. lect. (EA)

110L  Observational Astronomy Laboratory
Prereq: ASTR 110 with grade C or better (or concurrent), and MATH 23 or higher with grade C or better or placement at least MATH 25. Recommended: ICS 101 or equivalent. Introduces instrumentation and methods used in astronomical observations and research. Demonstrates astronomical principles through laboratory observations and analysis of astronomical data, and provides experience using instrumentation and software for observations, data collection and analysis, and image processing. 1cr., 3hrs. lab (EA, EL)

Auto Body Repair & Painting (ABRP)

D. Tanga

20E  Basic Auto Body
Introduces basic auto body skills and procedures. Covers the proper and safe handling of hand and power tools and materials used in the auto body industry. 2cr., 4hr. lect./lab
20F Basic Metal Work
*Prereq: ABRP 20E, or consent.*
Prepares sheet metal repair using the oxy-acetylene torch, MIG (GMAW) welding, and the resistance panel spot welder. Covers the use, maintenance, and safety of the specialized hand and power tools of this repair process. 2cr., 4hr. lect./lab

20G Auto Sheet Metal
*Prereq: ABRP 20F, or consent.*
Explains the theory and principle of the basic skills required for automotive sheet metal panel repair. Introduces picking and filing, shrinking of damaged sheet metal, and corrosion repair. 2cr., 4hr. lect./lab

20H Body & Fender
*Prereq: ABRP 20G, or consent.*
Explains principles of auto body repair skills in roughing, dinging, fender and panel repair, and the finishing procedures to complete the body and fender repair process. 2cr., 4hr. lect./lab

20I Auto Body Repair Practicum
*Prereq: ABRP 20G, or consent.*
Applies exercises in repair methods and procedures discussed in ABRP 20EFGH on live jobs. 2cr., 4hr. lect./lab

22F Refinishing Equipment & Techniques
*Prereq: ABRP 22E, or consent.*
Introduces safety, proper operation, and maintenance of the tools and equipment used for automotive refinishing. Covers surface preparation and the proper procedures of undercoat applications. 2cr., 4hr. lect./lab

22I Refinishing Practicum
*Prereq: ABRP 22H, or consent.*
Applies the refinish materials and skills acquired in ABRP 22EFGH on live jobs. 2cr., 4hr. lect./lab

22G Complete Refinishing Techniques
*Prereq: ABRP 22F, or consent.*
Explains the complete painting process. Covers preparation and application of sealers to surface, to the final detailing of the vehicle. 2cr., 4hr. lect./lab

22H Touch-Up Refinishing Techniques
*Prereq: ABRP 22G, or consent.*
Introduces vehicle preparation and various techniques for touch up refinishing. 2cr., 4hr. lect./lab

40E Automotive Trim and Glass
*Prereq: ABRP 20EFGHI and ABRP 22EFGH, or consent.*
Introduces the servicing, removing, and replacing of automotive hardware, interior and exterior trim, fixed and movable glass, and upholstery. 2cr., 4hr. lect./lab

40F Dimensioning Collision Damage
*Prereq: ABRP 40E, or consent.*
Explains methods to determine collision damage to the automotive chassis and suspension components for conventional framed and unitized vehicles. 2cr., 4hr. lect./lab

40H Structural Sectioning
*Prereq: ABRP 40G, or consent.*
Prepares for Structural Sectioning of conventional framed and unitted vehicles. 2cr., 4hr. lect./lab

41E Minor Collision Repair
*Prereq: ABRP 41EFGHI, or consent.*
Explains the repairing of minor collision damage to automotive sheet metal. 2cr., 4hr. lect./lab

41F Mechanical Systems
*Prereq: ABRP 41E, or consent.*
Introduces trouble shooting of automotive cooling system, air conditioning, and electrical systems during vehicle repair. 2cr., 4hr. lect./lab

41G Plastic Panel Repair
*Prereq: ABRP 41F, or consent.*
Introduces the repairing of damaged plastic and fiberglass panels and components. 2cr., 4hr. lect./lab

41I Management & Estimating
*Prereq: ABRP 41G, or consent.*
Introduces the student to the fundamentals of writing and understanding repair estimates and repair orders. Discusses management, business procedures, and industrial relations. 2cr., 4hr. lect./lab

44E Advanced Major Collision
*Prereq: ABRP 41EFGH, or consent.*
Applies specialized techniques in major collision repair on live jobs. 2cr., 4hr. lect./lab

44F Advanced Minor Collision
*Prereq: ABRP 41EFGHI, or consent.*
Applies specialized techniques in minor collision repair on live jobs. 2cr., 4hr. lect./lab

44G Advanced Complete Refinishing
*Prereq: ABRP 41EFGHI, or consent.*
Applies specialized techniques in complete automotive refinishing on live jobs. 2cr., 4hr. lect./lab

44H Advanced Touch-Up Refinishing
*Prereq: ABRP 41EFGHI, or consent.*
Applies specialized techniques in automotive touch-up refinishing on live jobs. 2cr., 4hr. lect./lab
Automotive Technology (AMT)

T. Hussey, T. Takushi

16 Car Care
Prereq: Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Explores auto mechanics for non-majors with primary emphasis on preventive maintenance service and minor repairs.
2cr., 3hr. lect./lab

20 Introduction to Auto Mechanics
Prereq: Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Introduces principles for operation of major automotive systems. Explains selection and use of basic automotive tools, equipment, and procedures for preventive maintenance and minor repair service. Includes lectures, demonstrations, and laboratory work on shop practice units and live service vehicles.
3cr., 5hr. lect./lab

30 Engines
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Introduces principles for operation of major automotive systems. Explains selection and use of basic automotive tools, equipment, and procedures for preventive maintenance and minor repair service. Includes lectures, demonstrations, and laboratory work on shop practice units and live service vehicles.
7cr., 12hr. lect./lab

40B Fuel and Emission Systems
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Examines principles of operation, diagnosis, service, and repair of the electrical system. Covers the electron theory, circuits and schematics, batteries, and charging systems. Explains use of automotive tools and testing equipment.
4cr., 7hr. lect./lab

40C Electrical/Electronics I
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Examines principles of operation, diagnosis, service, and repair of the electrical system. Covers the electron theory, circuits and schematics, batteries, and charging systems. Explains use of automotive tools and testing equipment.
4cr., 7hr. lect./lab

40G Ignition Systems
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Examines principles of operation, diagnosis, service, and repair of the ignition and computer systems. Explains the use of automotive tools and equipment.
4cr., 7hr. lect./lab

41C Electrical/Electronics II
Prereq: AMT 40C (or concurrent), and ENG 19 with grade C or better or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Examines principles of operation, diagnosis, service, and repair of the ignition and computer systems. Explains use of automotive tools and testing equipment.
3cr., 5hr. lect./lab

43 Heating and Air Conditioning
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Examines principles of operation, diagnosis, service, and repair of automotive air conditioning, heating, and automatic climate control systems. Explains use of automotive tools and testing equipment.
3cr., 5hr. lect./lab

46 Power Train
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Examines principles of operation, diagnosis, and repair of standard transmissions and transaxles. Explains use of automotive tools and testing equipment.
4cr., 7hr. lect./lab

50 Automatic Transmissions
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Examines principles of operation, diagnosis, and repair of automatic transmissions and transaxles. Explains use of automotive tools and testing equipment.
4cr., 8hr. lect./lab

53 Brake System
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Examines principles of operation, diagnosis, service, and repair of drum, disc, and power brake systems. Explains use of automotive tools and testing equipment.
3cr., 5hr. lect./lab

55 Suspension-Steering
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Student must maintain a valid Driver's license throughout duration of the automotive course of studies.
Examines principles of operation, design, and repair of standard and power steering systems, front and rear suspension, tires, wheels, alignment, and balancing. Explains use of automotive tools and testing equipment.
3cr., 5hr. lect./lab
60  Diagnostic and Repair
Prereq:  AMT 30, 40B, 40C, 40G, 41C, 43, 46, 50, 53, and 55, or consent. Student must maintain a valid Driver’s license throughout duration of the automotive course of studies. Applies diagnostic skills and techniques in advanced automotive mechanics technology with emphasis on realism in lab and shop operations. Includes students being prepared to take the ASE certification exam in the following areas: suspension and steering, electrical/electronics, engine performance, automatic transmission/transaxle, manual drive train and axles, brakes, and heating air conditioning. 7cr., 15hr. lect./lab

80  Small Engine Repair
Explores the theory and practice in the operation, repair, and maintenance of small displacement internal combustion engines including two-cycle and four-cycle types found on single cylinder lawn mowers, power plants, garden tillers, and chain saws. 2cr., 1hr. lect./lhr. lab

Biochemistry (BIOC)
B. Butler, S. Calder, C. Hornick, S. Irwin

241  Fundamentals of Biochemistry
Prereq:  MATH 25 with grade C or better, or placement at least MATH 100 or 103, or consent. Recommended:  High school science.
Introduces biological chemistry stressing integration of the fundamental concepts of general chemistry, inorganic chemistry, and organic chemistry with broad application of these principles to the study of living systems. 3cr., 3hr. lect. (EA)

244  Essentials of Biochemistry
Prereq:  BIOC 241 or CHEM 151 or CHEM 161, or consent.
Introduces chemical principles and concepts of living systems. Emphasizes the composition, function, and transformation of biological substances in animals, plants, and microorganisms. Provides sufficient organic chemistry to supplement a thorough understanding of the general concepts of biochemistry. 3cr., 3hr. lect. (EA)

6 Biological Sciences
See Agriculture, Biology, Botany, Microbiology, Science, and Zoology.

Biology (BIOL)
J. Boswell, B. Butler, S. Calder, A. Coopersmith, C. Hornick, S. Irwin

50  Biology Topics
Explores current issues and problems in biology. Includes topics such as human biology, diseases, nutrition, genetics, and natural history of Hawai‘i. 3cr., 3hr. lect.

100  Human Biology
Prereq:  ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Introduces students to the structure and function of cells, tissues, organs, and systems of the human body. Includes disease processes and recent scientific advances. 3cr., 3hr. lect. (IN)

101  Biology and Society
Prereq:  ENG 22 with grade C or better, or placement at ENG 100, or consent.
Introduces characteristics of science, historical development of scientific concepts, and interactions of society with science, illustrated by topics from biological sciences. (Crosslisted as SCI 121.) 4cr., 3hr. lect./3hr. lab (EA, EG, EL)

102  General Botany
Prereq:  ENG 22 with grade C or better, or placement at ENG 100, or consent.
Studies growth, function, and evolution of plants. Analyzes human interactions with plants and plant interactions with their environment. (Crosslisted as BOT 101.) 4cr., 3hr. lect./3hr. lab (EA, EG, EL)

103  Principles of Zoology
Prereq:  ENG 22 with grade C or better, or placement at ENG 100, or consent.
Surveys major animal groups with emphasis on structure, physiology, development, reproduction, evolution, ecology, behavior, and interactions with humans. (Crosslisted as ZOOL 101.) 4cr., 3hr. lect./3hr. lab (EA, EG, EL)

105  Hawaiian Field Biology
Prereq:  ENG 22 with grade C or better, or placement at ENG 100, or consent.
Surveys, in the classroom and on location, ecosystems from near-shore ocean waters to mountain top. Considers geological history, physical geography, and natural history. Discuss pre-Polynesian establishment of organisms, origins of endemic species, and the influences of human populations on island ecosystems. 4cr., 3hr. lect./3hr. lab (EA, EL, HI)

124  Environment & Ecology
Prereq:  ENG 22 with grade C or better, or placement at ENG 100, or consent.
Examines the biological and physical principles affecting human interactions with the environment. Explores the impacts of science, technology, values, and perceptions on global ecology. Discusses problems of pollution, overpopulation, and resource depletion with an emphasis on island ecosystems. Evaluates alternatives to current actions and public policies stressing responsibility of the individual. 3cr., 3hr. lect. (EA, EG)

124L  Environment & Ecology Laboratory
Prereq:  BIOL 124 with grade C or better (or concurrent), or consent.
Laboratory to accompany BIOL 124. 1cr., 3hr. lab (EA, EG, EL)

151  Introduction to Genetics
Prereq:  ENG 100, or consent. Recommended:  BIOL 100 or BIOL 101.
Introduces basic concepts in genetics and explores how they are used in research. Investigates human gene structure and function, including the genetic basis of development, causes of birth defects, mental retardation, genetic diseases, sexual determination, and behavior. Surveys current topics in genetic research. 3cr., 3hr. lect. (IN)
151L Introduction to Genetics Lab
Prereq: BIOL 100 or 101, and ENG 100, and at least MATH 23 with grade C or better or placement at least MATH 100, or consent.
Coreq: BIOL 151, or consent.
Recommended: CHEM 151.
Introduces molecular biology and classical genetics techniques utilized in the science of genetics. Prepares students to engage in laboratory investigations concerning problems in genetics. 1cr., 3hr. lab

171 Introductory Biology I
Prereq or coreq: CHEM 151 or 161, or consent. Coreq: BIOL 171, or consent.
Introduces cell structure and chemistry, growth, reproduction, genetics, evolution, viruses, bacteria, and simple eukaryotes. Required for life science majors. 3cr., 3hr. lect. (EA)

171L Introductory Biology I Laboratory
Prereq or coreq: CHEM 151 or 161, or consent. Coreq: BIOL 171, or consent.
Laboratory to accompany BIOL 171. 1cr., 3hr. lab (EA, EL)

172 Introductory Biology II
Prereq: BIOL 171, or consent.
Continues BIOL 171. Includes anatomy, physiology, and systematics of plants and animals. Studies behavior, ecosystems, populations, and communities. 3cr., 3hr. lect. (EA)

172L Introductory Biology II Laboratory
Prereq: BIOL 171, 171L, and 172 (or concurrent); or consent.
Laboratory to accompany BIOL 172. 1cr., 3hr. lab (EA, EL)

200 Coral Reefs
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Introduces the biology, ecology, and geology of stony corals and the reef structures they build. Identifies the roles of other members of the coral reef community including algae, other invertebrates, and fishes. Explores the use of corals as resources and the impacts of human activities on coral reefs. 4cr., 3hr. lect./3hr. lab (EA, EL, HI)

225 Fundamentals of Cell & Molecular Biology
Prereq: BIOL 151, BIOL 171 & 171L, CHEM 161 & 161L, and MICR 130; and CHEM 162 & 162L or BIOC 241; or consent. Recommended: ENG 100.
Introduces the fundamentals of cell and molecular biology. Covers the physiology of prokaryotic and eukaryotic cells, protein structure and functions, protein synthesis, genome organization in viruses, gene cloning, DNA technology, and genetic engineering. Discusses bioethics. 4cr., 3hr. lect./3hr. lab

40 Blueprint Reading & Estimating
Prereq: BLPR 22, or consent.
Treats reading and interpreting blueprints and specifications. Covers material take offs, working drawings, sketch, and work schedules. 3cr., 5hr. lect./lab

Botany (BOT)
J. Boswell, A. Emmsley, S.K. Raymond
101 General Botany
Studies growth, function, and evolution of plants. Analyzes human interactions with plants and plant interactions with their environment. (Crosslisted as BIOL 102.) 4cr., 3hr. lect./3hr. lab (EA, EL, EG)

105 Hawaiian Ethnobotany
Identifies endemic, indigenous, and Polynesian introduced flora of Hawai‘i. Examines the many uses of Hawai‘i’s flora by the indigenous people. Reveals the relationship of gods/plants/man, and connects belief and practices with the intentional migration of specific plants. (Crosslisted as HWST 211). Meets Social Science requirement, not Natural Science requirement. 3cr., 3hr. lect./lab (CO, EA, HI)

Business (BUS)
120 Principles of Business
Prereq: ENG 19 with grade C or better, or placement at least ENG 22 or 55, or consent.
Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Surveys the fundamentals of American business enterprise. Treats the foundations and responsibilities of business, management, finance, marketing, and the legal, government, and social environment. 3cr., 3hr. lect./disc.
125 Starting a Small Business
Prereq: ENG 19 with grade C or better, or placement at least ENG 22 or 55, or consent. Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Surveys the small business environment, establishing a firm, decision-making processes, marketing assessments, financing, operations considerations, and government regulations. Covers development of a business plan. Designed for those who wish to start or are currently operating their own small business.
3cr., 3hr. lect.

130 Business Communication - Oral
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Develops competence in oral communication within business and organizational context. Provides the theory and practical skills to be a confident and effective communicator in a variety of business and organizational settings. (Crosslisted as COM 130.) 3cr., 3hr. lect. (FO)

150 Personal Finance
Prereq: ENG 19 with grade C or better or placement at least ENG 22 or 55, and MATH 1 or placement at least MATH 22 or 50; or consent.
Introduces financial planning, money management and tax planning. Includes financing real and personal property, purchasing insurance and managing investments. (Crosslisted as ECON 150.) 3cr., 3hr. lect.

301 Introduction to ABIT
Prereq: Admission to the ABIT program.
Focuses on skills required for ethical and effective conduct in business. Includes teamwork, oral presentation, writing, computer skills, and social skills that are part of the business world. 1cr., 1hr. lect.

318 Principles of Finance
Prereq: ACC 202, BUS 120, ECON 130, ECON 131, MATH 115, and MATH 135 or higher; or consent.
Focuses on financial analysis and management. Includes financial statement analysis, discounted cash flow, financial markets and interest rate determination, stock and bond valuation models, capital budgeting, and management of working capital utilizing manual calculations.
Provides knowledge of the concepts of risk and return, cost of capital, and capital structure. Includes international finance and elements of business ethics. 3cr., 3 hr. lect.

320 Entrepreneurship – Opportunity Recognition and Evaluation
Prereq: MGT 310 and MKT 300, or consent.
Develops skills necessary to recognize an opportunity, and evaluate the viability of an idea, prior to the investment of significant time and money. Uses student teams to develop, present, and critique entrepreneurial startups. 3cr., 3hr. lect.

322 New Venture Leadership
Prereq: MGT 310, or consent. Recommended: PSY 100 or SOC 100.
Focuses on organizational leadership. Emphasizes the human dimension within organizations. Provides a foundation for understanding the process and stages of organization dynamics. Includes the management of change and innovation. 3cr., 3hr. lect.

415 Entrepreneurial Business Planning
Prereq: ACC 300, BUS 318, MGT 310, and MKT 300; or consent.
Teaches development and implementation of business plans. Includes research, writing, and presentations. Explores the use of business plans for raising capital, starting a new business, and validating timelines. 3cr., 3hr. lect.

420 Global Business Strategies
Prereq: MGT 300 and MGT 310, or consent.
Focuses on understanding the global environment and the interconnections of cultural, political, legal, economic, and ethical systems. Identifies forms of business ownership and international opportunities. Explores basic concepts underlying international finance, management, marketing, and trade relations. 3cr., 3hr. lect.

495 ABIT Capstone
Prereq: ICS 420 with grade C or better; Senior standing, and approval of ABIT faculty.
Provides an opportunity to utilize and demonstrate the tools and understanding developed during the ABIT program. Includes strategy formulation and implementation, competitive analysis, and e-commerce as models for problem solving and decision-making in an organizational setting. A capstone project is required. 6cr., 6hr. lect./lab

Business Technology (BUSN)

70 Filing
Prereq or coreq: ENG 22 or 55, or consent.
Introduces indexing and filing procedures. Covers the theory and practice of alphabetic, geographic, and subject systems. 1cr., 1.33hr. lect./lab

89 Electronic Calculating
Gives students practice with real world skills used in the modern business environment. Emphasizes proper technique and speed with the ten-key pad found on calculators, computer keyboards, and cash registers. Develops the ability to work with numbers and use of a calculator to perform business computations. 1cr., 1.25hr. lect./lab, 1 hr. lab

110 Office Computer Troubleshooting and Maintenance
Prereq: BUSN 150 or ICS 101 either with grade C or better, or consent.
Introduces basic troubleshooting and maintenance procedures for personal computers used in typical office environments. Develops basic understanding of computer hardware modules and operating system software. Covers system assembly, disassembly, configuration, booting up, preparing disk drives, loading operating system software, diagnosing problems, and upgrading. 3cr., 3.5hr. lect./lab

121 Introduction to Word Processing
Introduces the parts of a personal computer and how the computer keyboard and mouse are used. Develops the ability to key alphabetic, punctuation, number, symbol keys, and the ten-key pad by touch. Further develops speed, accuracy, and technique keying. Introduces document formatting. 3cr., 3hr. lect./lab
123  **Word Processing for Business**  
PreReq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent. Recommended: 35 gross words a minute (gwm) or BUSN 121 with grade C or better. Uses advanced features from a word processing program to create business documents emphasizing production and proofreading. Integrates knowledge of the Internet and the computer. Includes timed computer keyboarding skills for creating and editing business documents and sending electronic attachments. 3cr., 3hr. lect./lab

150  **Introduction to Business Computing**  
Recommended: BUSN 121 or high school typing. Introduces the role of computers in the evolution of an information-based society. Reviews history and need for information processing, the basic information processing cycle and functions, processing capabilities of computers, system development, and program development. Provides students with experience in an operating system and business applications, such as word processing, database management, spreadsheets, and presentation software. 3cr., 3hr. lect./lab (FI)

151  **Intermediate Business Computing**  
PreReq: BUSN 150 or ICS 101 either with grade C or better, or consent. Expands the concepts of business computing introduced in BUSN 150. Develops greater proficiency in creating, modifying, and printing documents, spreadsheets, database queries, reports, and forms. Broadens knowledge of word processing, spreadsheet, database, and presentation software. Provides experience with typical business applications that utilize Intranet and Internet technologies. 3cr., 3hr. lect./lab (FI)

157  **Desktop Publishing for Business**  
PreReq: BUSN 150 or ICS 101 either with grade C or better, or consent. Introduces desktop publishing on the personal computer. Develops proficiency in creating and modifying layout for brochures, business cards, fliers, and newsletters. Covers basic principles of graphics designs, formatting techniques, importing text files from word processing programs, preparing and importing various types of graphics, and creating special effects with graphics and text. 3cr., 3hr. lect./lab

161  **Customer Service**  
PreReq: ENG 22 or 55, or placement at ENG 100, or consent. This course builds and maintains the critical skills and understanding necessary to be a dynamic and successful member of today's rapidly growing service economy. Individuals who work with customers will gain insight into customer behavior and attitudes and will develop strategies to create positive customer relationships encountered in various situations on the job. This is a Business Technology course. 3cr., 3hr. lect./lab

166  **Professional Employment Preparation**  
Recommended: Ability to keyboard and knowledge of word processing. Facilitates employment search by emphasizing professional techniques and standards in the preparation of application forms, resumes, cover letters, and employment interviews. (Crosslisted as IS 105C.) 1cr., 1lect.

170  **Records and Information Management**  
PreReq: ENG 100 (or concurrent), or consent. Studies principles and procedures for organizing and operating Records and Information Management (RIM) programs. Topics include: selection of filing systems, equipment, and supplies, procedures for storage, retrieval, transfer, retention, and disposal of record; records inventory and analysis; records protection and disposition; and study and application of ARMA (Association of Records Managers and Administrators) rules for alphabetic, alphanumeric, geographic, numeric, and subject methods. Helps a business or organization meet its fiscal, legal, governmental, requirements by managing its information systems. 3cr., 3hr. lect./lab

183  **Executive Transcription**  
PreReq: BUSN 123 and ENG 209 (or concurrent); or consent. Develops machine transcription skills for the conversion of business documents from dictated, unedited material to correctly formatted, mailable copy. Emphasizes executive, medical, legal, and technical terminology. 3cr., 3hr. lect./lab

185  **Processing Physician’s Orders**  
PreReq: NURS 50 and BUSN 183 both with grade C or better; or consent. Introduces skills for transcribing physician orders. Includes transcribing medication, intravenous, admission, pre-operative, post-operative, and referral orders. Includes computer transcription. 3cr., 1hr. lect./4hr. lab

189  **Business Mathematics**  
PreReq: MATH 22 with grade C or better, or placement at least MATH 23, or consent. Introduces various quantitative computational procedures used in accounting and finance such as present and future value concepts, payroll, inventory, and international currency exchange rates. Utilization of the electronic 10-key pad as a tool for calculating will be stressed. 3cr., 3hr. lect./lab

193v  **Business Technology Cooperative Education**  
PreReq: Business Technology major or permission of department or instructor. Provides practical career-related work experience through a program used nationally in colleges and universities to apply classroom knowledge and to develop job competencies. Full-time or part-time work in private and public sectors of the business, government and industrial communities is utilized for this program. 1-3cr., 1.25hr. Seminar/Minimum 75 documented field experience hours per credit (e.g., 1cr.=75hrs; 2cr.=150hrs.)
232 Business Computer Spreadsheets  
Prereq: BUSN 151 and BUSN 189 both with grade C or better; or consent.
Covers business spreadsheets with special attention to advanced techniques required by experts. Develops critical thinking skills for applying software tools to business problems. Covers financial and logical functions, custom formatting, charts and graphs, multi-sheet and shared workbooks, formula auditing, data importing, Web features, one-variable and two-variable data tables, and application development tools. 3 cr., 3 hr. lect./lab

237 Business Computer Databases  
Prereq: BUSN 151 and BUSN 189 both with grade C or better; or consent.
Covers business databases with special attention to advanced techniques required by experts. Develops critical thinking for applying software tools to business problems. Covers databases and table creation and modification, queries, forms, reports, defining data relationships, importing and exporting data, multi-user databases, operations on the Web, and creating database applications. 3 cr., 3 hr. lect./lab

261 Web Page Construction Fundamentals and Marketing  
Prereq: BUSN 150 or ICS 101 either with grade C or better; or consent.
Introduces web page construction including HTML code, Internet service providers, and web page construction software. Examines World Wide Web marketing strategies. 3 cr., 3 hr. lect./lab

262 e-Commerce Web Construction and Marketing  
Prereq: BUSN 261 with grade C or better, or consent.
Introduces e-Commerce web page construction including advanced HTML Code, Internet service providers, web page construction software, shopping baskets, marketing strategies, and other topics. 3 cr., 3 hr. lect./lab

286 Legal Terminology and Procedures  
Prereq: ENG 209 with grade C or better, or consent.
Covers the skills needed for a legal office assistant in a law firm or other legal setting. Explains legal terms, concepts, and principles. Emphasizes creating, formatting, and editing common types of legal documents. 3 cr., 3 hr. lect./lab

292 Integrated Office Procedures  
Prereq: BUSN 123, 151, and 157 all with grade C or better; or consent.
Includes advanced word processing, spreadsheet, database, integration of applications, and creation of a web site. Incorporates electronic presentations for projects. Utilizes Microsoft or Corel WordPerfect Office applications. Applies electronic presentations for projects. Prepares for Microsoft Office User Specialist (MOUS) Core certification. Designed to bring together within a portfolio all elements of learning from the Business Technology program. 3 cr., 3 hr. lect./lab

Business Law (BLAW)  
R. Miller  
200 Legal Environment of Business  
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Introduces legal environment in which businesses operate with particular attention to principles of law relating to contracts, agency, commercial paper, partnerships, corporations, and government regulations. 3 cr., 3 hr. lect.

Carpentry (CARP)  
C. Atay  
20 Basic Carpentry Skills  
Prereq: ENG 19 with grade C or placement at ENG 22 or 55, and at least MATH 22 (or concurrent); or consent.
Introduces proper use and maintenance of carpentry hand and power tools. Practices selecting and using construction materials and fastening systems. 3 cr., 1 hr. lect./3 hr. lab

41 Rough Carpentry  
Prereq: CARP 20, or consent.
Introduces theoretical and on-the-job skills necessary to lay out and construct foundations, wall and ceiling framing, and roofing systems for residential and light commercial construction. 3 cr., 4 hr. lect./lab

42 Exterior Finishing  
Prereq: CARP 20, or consent.
Covers theoretical and on-the-job skills necessary to install exterior windows, doors, roofing, siding, and decks in residential and light commercial construction. 3 cr., 4 hr. lect./lab

43 Interior Finish  
Prereq: CARP 20, or consent.
Introduces interior finish of floors, walls, ceiling, trim and special feature applications in residential and light commercial construction. 3 cr., 4 hr. lect./lab

44 Cabinets and Stairways  
Prereq: CARP 20, or consent.
Focuses on installation of cabinets, countertops, stairways, and railings in residential and light commercial construction. 3 cr., 4 hr. lect./lab

Chemistry (CHEM)  
S. Calder, S. Irwin  
151 Elementary Survey of Chemistry  
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, and MATH 25 or placement at least MATH 103; or consent.
Provides the beginning student with background in the fundamentals of chemistry. Intended for students needing a one-semester science course. Presents films, demonstrations, and experiments of introductory laboratory techniques illustrating chemical principles. 4 cr., 3 hr. lect./3 hr. lab (FN)

161 General Chemistry I  
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, and MATH 103 with grade C or better (or concurrent) or placement at least MATH 135; or consent.
Coreq: CHEM 161L.
Covers basic principles of chemistry including introduction to units, equations, atomic structure, chemical bonding, gases, crystals, and solutions. 3 cr., 3 hr. lect. (FN)

161L General Chemistry Laboratory I  
Coreq: CHEM 161, or consent.
Presents laboratory experiments illustrating fundamental principles of chemistry. 1 cr., 3 hr. lab
162  General Chemistry II  
Prereq: CHEM 161 and MATH 135; or consent.  Coreq: CHEM 162L.
Covers reaction thermodynamics, chemical kinetics, chemical equilibrium, acids and bases, solubility, complex ions, oxidation-reduction, and the various groups of elements including their differences, production, uses, and reactions.  (FN) 3cr., 3hr. lect.

162L  General Chemistry Laboratory II  
Coreq: CHEM 162, or consent.
Presents laboratory experiments illustrating fundamental principles of chemistry.  1cr., 3hr. lab

Communication (COM)

C. Thompson

130  Business Communication - Oral  
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Develops competence in oral communication within business and organizational context.  Provides the theory and practical skills to be a confident and effective communicator in a variety of business and organizational settings.  (Crosslisted as BUS 130.) 3cr., 3hr. lect.  (FO)

145  Interpersonal Communication I  
Provides the theory and practical skills to be a competent communicator in a one-to-one setting.  3cr., 3hr. lect.  (FO, IN)

210  Intercultural Communication I  
Prereq: ENG 100, or consent.
Explores problems and opportunities of communicating in a variety of intercultural contexts.  Focuses on theory and practice in managing intercultural communication effectiveness.  3cr., 3hr. lect.  (FO, CO, CG)

215  Conflict Resolution & Mediation  
Prereq: COM 145 or BUS/COM 130 or PSY 100 with grade C or better, or consent.  Recommended: ENG 100 with grade C or better.
Explores the reason for conflict and the different approaches for seeking resolution for conflict.  Studies personal and societal value systems, the psychology of how people respond to conflict, the impact of culture on conflict styles, communication skills useful in dealing with conflict, and alternative resolution strategies.  Practices mediation skills as a third party intervention method.  (Crosslisted as PSY 253.) 3cr., 3hr. lect.  (CO)

353  Conflict Management & Resolution  
Prereq: ENG 100, PSY 100, or SOC 100, any with grade C or better; and BUS/COM 130, COM 145, or COM 210, any with grade C or better; or consent.  Recommended: PSY 253/COM 215.
Examines communication and behavior in interpersonal conflict through analysis of professional and personal relationships.  Assesses political, social, and cultural influences on conflict, and applies Western and Polynesian models of dispute resolution processes in relational conflict.  (Crosslisted as PSY 353.) 3cr., 3hr. lect.

459  Intercultural Communication II  
Prereq: ENG 100 with grade C or better, or consent.
Surveys the major factors affecting interpersonal communication between/among members of different cultures.  Expands breadth and depth of knowledge of cultural, social, and political influences on intercultural communication.  Focuses on theory, research, and managing intercultural effectiveness globally.  3cr., 3hr. lect.

Community Health Worker (CHW)

N. Johnson

150  Community Health Worker  
Prereq: ENG 19 with grade C or better, or placement at ENG 22, or consent.  Recommended: BIOL 100; PHRM 103, 104, 105; HLTH 150 with grade C or better (or concurrent).
Introduces theoretical and practical clinical skills necessary for providing basic health care assistance and screening services.  4cr., 8hr. lect./lab

155  Community Health Worker Externship  
Prereq: CHW 150 and PHRM 105 both with grade C or better; or consent.
Provides practical skills and experiences in clinic settings and in primary health care centers.  Increases ability and effectiveness in inter-agency networking, home visiting/client assessments, and case management techniques.  3cr., 1hr. lect./6hr. lab

Cooperative Arts & Sciences Education (CASE)

CASE 193v, 293v, 393v, 493v Work-based learning.  See Special Curricula section on page 52 for details, or call 984-3318.

Cooperative Vocational Education (CVE)

CVE 93v, 193v, 293v Work-based learning.  See Special Curricula section on page 52 for details, or call 984-3318.

Culinary Arts (CULN, FSER)

D. Louie, B. Marquez, R. Santos, T. Shurilla, C. Speere, D. Sprinkle

23  Menu Merchandising  
Prereq: CA in FSER, or consent.
Covers principles of menu merchandising such as cost and pricing, equipment and personnel, design and format, and marketing.  2cr., 2hr. lect.

34  Purchasing & Control  
Prereq: CA in CULN or HOST, or consent.
Analyzes purchasing and food control systems in commercial food service operations.  Practices cost and sales analysis, comparative buying, and inventory control.  4cr., 8hr. lect./lab

41  Dining Room Service  
Prereq: CULN 112 (formerly FSER 21) with grade C or better, or consent.
Provides study and practice in various types of table service.  Teaches proper serving etiquette with respect to customer relations.  Includes practical experiences in a public dining room.  3cr., 1hr. lect./6hr. lab
42  Introduction to Beverage Department
Prereq: CA in CULN, or consent.
Meets the basic needs of cooks with regards to alcoholic beverages used in the restaurant industry. Surveys the following areas: basic production processes of alcoholic beverages; bar set-up and equipment used; job descriptions of beverage servers and specific techniques used; and responsible alcoholic beverage service. 1cr., 1hr. lect.

44  Beverage Operations
Prereq: CA in CULN, or consent.
Covers product identification of wines, beers, and spirits, including how they are manufactured and marketed. Emphasizes bar management over bartending skills. Teaches principles of setting up and operating a bar, including cost and quality controls, sales/merchandising, customer relations, and serving alcoholic beverages responsibly. 3cr., 3hr. lect.

46  Skill Building I
Identifies and practices individual culinary skill components necessary in the professional kitchen. Demonstrates the proper maintenance and uses of knives and other kitchen hand tools. Discusses the production, properties, and uses of kitchen products including thickening agents, stocks, sauces, soups, gelatin, and salad dressings. Identifies proper storage techniques for food products. Discusses the importance of professional attitudes and habits toward work. Introduces and practices professionalism and self-development. 2cr., 15hr. lect./45hr. lab per semester

48  Skill Building II
Prereq: FSER 46 with grade C or better (or concurrent), or consent.
Identifies and practices individual culinary skill components necessary in the professional kitchen. Discusses production, types, proper storage, and uses of various kitchen ingredients including cheeses and eggs. Lists and uses methods of cost/kitchen control including measurements, portions, and recipes. Emphasizes professionalism and self-development. 2cr., 15hr. lect./45hr. lab per semester

52  Short Order Cookery
Identifies and uses tools, equipment, supplies, and foods used in a short order kitchen. Examines various positions in the short order kitchen. Practices, applies, and analyzes principles of cookery and service of short order foods. 2cr., 15hr. lect./45hr. lab per semester

54  Cold Food Pantry Cookery
Identifies and uses tools, equipment, supplies, and foods used in the cold food kitchen. Discusses the preparation and properties of cold food ingredients. Examines and practices the preparation, presentation, quality control, and merchandising of foods served cold. 2cr., 15hr. lect./45hr. lab per semester

62  Fundamentals of Baking
Prereq: FSER 62 with grade C or better, or consent.
Studies and uses bakery tools, equipment, materials, and recipes. Provides practical experience in working basic hotel and restaurant bakery stations. Involves quality production of bakery goods, pastries, and desserts. 4cr., 2hr. lect./6hr. lab per semester

64  Advanced Baking I
Prereq: FSER 64 with grade C or better, or consent.
Develops skills used in the production of more advanced baked pastry and confectionery products: especially chocolates, sugars, candies, and decorated specialties. 4cr., 2hr. lect./6hr. lab

65  Advanced Baking II
Prereq: FSER 64 with grade C or better, or consent.
Develops skills used in the production of more advanced baked pastry and confectionery products: especially soufflés, frozen items, marzipan, and decorated specialties. 4cr., 2hr. lect./6hr. lab

70  Advanced Cookery
Prereq: FSER 46, 48, 52, 54, and CULN 112, 120 all with grade C or better; or consent.
Provides practice and theory in the art of ala carte and banquet food production as found in quality hotels and specialty restaurants. 5cr., 2hr. lect./9hr. lab

72  Buffet Preparation
Prereq: CA in CULN, or consent.
Provides instruction and demonstration in the preparation of hot and cold hors d’oeuvres, canapes, aspics, chaud-froids, mousses, pates and terrines, buffet centerpieces, and vegetable and ice carvings. Discusses buffet catering, set-up, and menu planning. 4cr., 2hr. lect./6hr. lab

85  School Food Service Recordkeeping
Develops skills and understanding of policies, forms, and procedures required in school food service recordkeeping. 2cr., 2hr. lect.

111  Introduction to the Culinary Industry
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Provides an overview of the culinary industry within the aspects of the entire hospitality industry. Provides students with an introduction to the historical, social, and cultural forces that have affected and shaped the industry of today. Identifies job qualifications and opportunities, professional standards, communication skills, and attitudes essential for successful workers in the industry. (Formerly FSER 20.) 2cr., 2hr. lect.

112  Sanitation and Safety
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Studies and applies the principles and procedures of sanitation and safety in the hospitality industry. Includes the study of food-borne illnesses, biological, chemical, physical hazards, and cross-contamination as they may occur during the flow of food. Introduces HACCP (Hazard Analysis Critical Control Point) and other sanitation and safety programs. Covers safety issues and OSHA (Occupational Safety and Health Administration) guidelines and standards as they apply to the hospitality industry. (Formerly FSER 21.) 2cr., 2hr. lect.
120 Fundamentals of Cookery  
**Prereq:** CULN 112 with grade C or better (or concurrent), or consent.  
Focuses on fundamental concepts, skills, and techniques of cookery. Includes the use of standardized recipes. Covers basic cooking methods for meats, poultry, seafood, vegetables, and starches. Teaches identification, use and maintenance of equipment, tools, and utensils in a safe and sanitary manner. (Formerly FSER 50 & 60.) 4cr., 30hr. lect./90hr. lab per semester (to be offered as 5 wk. or 8 wk. module)

151v Work Practicum  
**Prereq:** CULN 112 (or concurrent), or consent. This course provides broad-based exposure to principles and practices of the fundamentals of catering with the food service industry. Students utilize practical hands-on experiences to practice all facets of sales, planning, preparation, and service of catered on and off premise affairs covering: theme, receptions, buffets, and banquets. It also provides a means for observing and discussing a variety of food service operations through field trips. (May be repeated for a maximum of 9 credits.) 1-3 cr., 1 hr. seminar, 3hr. practicum per credit per week.

180 Food, Cooking, & Health in Hawai’i  
**Prereq:** CA in Culinary Arts and FSHN 185, or consent.  
Introduces the unique aspects of Hawai’i and Hawaiian culture as they relate to food, the origins of native Hawaiian foods, their uses and the protocol involved. Relates changes in traditional Hawaiian menus and diets to society and time. Discusses nutrition principles of the traditional Hawaiian diet and use those principles to develop healthy foods and menus in partnership with local farmers. Identifies native Hawaiian foods and uses them to develop a contemporary cuisine. 3cr., 1hr. lect., 6hr. lab

185 Cooking for Better Health  
**Prereq:** CA in Culinary Arts and FSHN 185; or consent.  
Reviews and studies basic nutrition principles upon which healthy menus can be built. Combines nutrition, nutritional cooking principles and advanced cookery methods and techniques to produce and serve healthy classical and modern cuisine. 3cr., 1 hr. lect./6hr. lab

191v Work Practicum & Seminar in the Culinary Arts  
**Prereq:** FSER 46, 48, 54, and CULN 111, 112, 120 all with grade C or better; or consent. Provides individualized, broad-based exposure to the principles and practice of the culinary arts via supervised work experiences in various operational capacities. Utilizes seminars to enhance application and relevance of principles and required professional and personal growth. (May be repeated for a maximum of 9 credits.) 1-3cr., 1hr. seminar, 3hr. practicum per credit per week.

293v Culinary Arts Field Experiences  
**Prereq:** CA in Culinary Arts, or consent. Offers flexible, customized, and supervised school-to-work experiences in all aspects of the culinary arts industry. Integrates and applies classroom theory to work situations via numerous field experiences. Infuses the “Culinary Code” into field experiences. (May be repeated for a maximum of 9 credits.) 1-5hr. field experience per week and seminars arranged

### Dental Assisting (DENT)

J. Yamada

120 Dental Office Principles for Dental Assistants  
**Prereq:** Admission to Dental Assisting program or consent, and ENG 22 with grade C or better or placement at ENG 100.  
Develops skills and knowledge to manage the business activities of the dental office. Introduces communication skills, record and financial management, scheduling practices, marketing and career objectives for the dental assistant. Includes telephone techniques, scheduling and confirming appointments, organization of files, charts and patient records, claims processing, accounting, patient needs and follow-up, marketing techniques, maintaining and ordering of dental supplies. 3cr., 3hr. lect.

150 Survey of Dance  
Provides a survey of contemporary western dance including ballet, modern dance and jazz, with emphasis on appreciation and understanding of dance as an art form. 3cr. 3hr. lect.

180 Dance Production I  
**Coreq:** DNCE 131 or 132, or consent. Provides an opportunity for creation and performance of a dance piece. Addresses all aspects of production. 1cr., 2hr. lect./lab

### Dance (DNCE)

131 Modern Dance I  
Provides an introduction to basic modern dance technique skills and explores the creative process through dance. 3cr., 4hr. lect./lab (HE)

132 Modern Dance II  
**Prereq:** DNCE 131, or consent. Provides a continuation of the development of skills and concepts introduced in DNCE 131. 3cr., 4hr. lect./lab (HE)

141 Jazz Dance I  
Introduces the fundamental techniques of jazz dance to the beginning student and encourages creativity through movement and music. 3cr., 4hr. lect./lab (HE)
151 Intro to Chairside Dental Assisting
Prereq: Admission to Dental Assisting program, or consent.
Introduces basic procedures of chairside assisting, use and care of dental equipment, patient management, instrument identification, sterilization procedures and tray set-up preparation, and manipulation of dental materials, including temporary dressings, cement bases and liners, topical agents, alginates, composites, resins, and amalgams. Includes supervised clinical experience in dental and periodontal charting, and dental assisting functions. (Letter grade only.) 5cr., 3hr. lect./3hr. lab/2hr. lect./lab

152 Chairside Dental Assisting
Prereq: DENT 151 with grade C or better, or consent.
Provides supervised clinical experience in dental assisting. Includes supervised clinical in externship environments. Includes advanced and specialty chairside procedures. (Letter grade only.) 4cr., 1 hr. lect./6 hr. lab/2hr. lect./lab

154 Dental Materials
Prereq: DENT 151 with grade C or better, or consent.
Reviews physical and chemical properties and manipulations of alginate impression materials, gypsum products, cements, resins, metallic and non metallic restorative materials, investments, and waxes, polysulfide elastmeric impression materials, condensations silicone and polyisoprene/polynyl elastometric impression materials. (Letter grade only.) 1cr., 2hr. lect./lab

156 Oral Biology I
Prereq: Admission to the Dental Assisting program, or consent.
Discusses general anatomy of the skull; arteries, veins, and lymphatics; musculature; and nervous structures of the head and neck, including the normal periodontal tissues, oral mucous membranes, and salivary glands. Includes the embryologic development of the structures and tissues of the head, neck, teeth and oral cavity, oral microbiology, and nutrition. Discusses the anatomy and identification of teeth, the eruption sequence, normal occlusion, and classification of occlusion. (Letter grade only.) 3cr., 2hr. lect./2hr. lect./lab

155 Dental Emergencies
Prereq: Admission to Dental Hygiene program.
Provides an overview of medical and dental emergencies including prevention of and preparedness for management of emergencies, client observation, and vital signs. Discusses basic principles of pharmacology related to emergencies including drug actions and interactions, toxicity and allergy, dental drugs in common use, and drugs used in the treatment of medical problems. Describes legal and ethical aspects of emergency procedures in dentistry. 1cr., 1hr. lect.

164 Oral Biology I
Prereq: Admission to the Dental Assisting program, or consent.
Discusses general anatomy of the skull; arteries, veins, and lymphatics; musculature; and nervous structures of the head and neck, including the normal periodontal tissues, oral mucous membranes, and salivary glands. Includes the embryologic development of the structures and tissues of the head, neck, teeth and oral cavity, oral microbiology, and nutrition. Discusses the anatomy and identification of teeth, the eruption sequence, normal occlusion, and classification of occlusion. (Letter grade only.) 3cr., 2hr. lect./2hr. lect./lab

156 Oral Biology II
Prereq: DENT 164 with grade C or better, or consent.
Reviews embryonic development of the structures and tissues in the head, neck, teeth, and oral cavity. Discusses histology of the hard and soft tissues of the oral cavity. Explains development of structural defects involving the oral cavity and teeth. Includes normal periodontal tissues, oral mucous membranes, and salivary glands. (Letter grade only.) 2cr., 4hr. lect./lab

176 Dental Radiology I
Prereq: Admission to the Dental Assisting program, or consent.
Discusses production, characteristics, and biological effects of radiation, and the functions, components, and operation of the x-ray unit. Includes radiation protection and monitoring, chemistry and techniques associated with x-ray film, and developing solutions. Reviews anatomic landmarks, and introduces intra-oral and long-cone radiographic techniques in bitewing, periapical, and occlusal surveys. (Letter grade only.) 2cr., 3hr. lab/2hr. lect./lab

177 Dental Radiology II
Prereq: DENT 176 with grade C or better, or consent.
Discusses evaluation of film quality and recognition of anomalies and variations in tissue density. Introduces specialized procedures for the periodontic, endodontic, and edentulous patient. Explains forensic and legal considerations, and introduces principles of panoramic and cephalometric film. (Letter grade only.) 1cr., 2hr. lect./lab

150 Oral Histology & Embryology
Prereq: DENT 165 with grade C or better, or consent.
Describes general and oral histology including an overview of oral embryology, a study of the fundamentals of cytology, and the normal microscopic anatomy of oral tissues. 2 cr., 1hr. lect/2hr. lect./lab

153 Assessment Procedures in Dental Hygiene
Prereq: Admission to Dental Hygiene program.
Provides an orientation to dental hygiene practice. Focuses on the assessment techniques of the dental hygiene process of care model. Introduces infectious diseases important to dentistry, hazardous materials management, waste management, and rules of regulatory agencies (DCCA, OSHA, CDC and ADA). Teaches disinfection, instrument decontamination, sterilization procedures, tray set-up preparation and protocols, and emergency procedures for hazardous and biohazardous waste and materials. Focuses on dental hygiene assessment procedures including: review of health/dental history, vital signs, extra/intraoral examination, assessment of the dentition, and comprehensive periodontal examination. Discusses rationale for collection of assessment data and associated clinical procedures. 2 cr., 2hr. lect.
Describes neoplasms of the oral cavity. Bacterial, viral, and fungal origin.

Examines pathology of the head, neck, and oral structures. Differentiates developmental changes. Describes neoplasms of the oral cavity.

Pathology and diseases related to the dental hygiene client, including the indications and contraindications for care, modifications to treatment, and appointment planning for special patient/client populations. Uses client case studies.

Focuses on fundamental principles of periodontology including normal periodontium, etiology, and classification of periodontal disease and relationship of dental deposits to periodontal diseases. Correlates basic sciences with the clinical aspects of periodontal diseases. Describes etiology and pathogenesis of periodontal diseases. Identifies development of periodontal pocket, abscess, and process of bone loss. Demonstrates advanced instrumentation techniques, ultrasonic devices, root planing, curette, subgingival irrigation, and hypersensitivity.


Focuses on assessing, planning, implementing, and evaluating dental hygiene care on clinic clients. Develops clinical competency, skills, and performance with each successive academic semester. 2 cr., 1 hr. lect./4 hr. lab

Focuses on assessing, planning, implementing, and evaluating dental hygiene care on clinic clients. Develops clinical competency and skills. 5 cr., 1 hr. lect./16 hr. lab

Focuses on the role of the public health professional in improving the oral health in the community. Examines community dental health problems; school dental health programs; epidemiology of dental disease; and assessment, development, implementation, and evaluation of a community dental health program. 2 cr., 2 hr. lect.

Describes ethics, jurisprudence, and practice aspects of dental hygiene practice. Discusses resumes, interviewing, and office policies. 1 cr., 1 hr. lect.

Focuses on assessing, planning, implementing, and evaluating dental hygiene care on clinic clients. Develops clinical competency, skills, and performance with each successive academic semester. 2 cr., 1 hr. lect./4 hr. lab

Focuses on assessing, planning, implementing, and evaluating dental hygiene care on clinic clients. Develops clinical competency and skills. 5 cr., 1 hr. lect./16 hr. lab

Focuses on the role of the public health professional in improving the oral health in the community. Examines community dental health problems; school dental health programs; epidemiology of dental disease; and assessment, development, implementation, and evaluation of a community dental health program. 2 cr., 2 hr. lect.
267 Dental Radiology and Interpretation
Prereq: DENT 176 & 177 both with grade C or better.
Reviews the production, characteristics, and biological effects of radiation, and functions, components, and operation of the x-ray unit. Includes radiation protection and monitoring and chemistry and techniques associated with x-ray film and developing solutions. Reviews anatomic landmarks, and intraoral and long-cone radiographic techniques in bitewing, periapical, and occlusal surveys. Introduces radiographic identification and interpretation of radiographic caries, periodontal disease, trauma, and dental anomalies. Includes clinical lab experience of taking and interpreting x-rays on clients. 1cr., 2hr. lect./lab

268 Advanced Dental Radiology and Interpretation
Prereq: DH 267 with grade C or better. Expands clinical lab experience taking and interpreting x-rays on clients. Includes advanced radiographic identification and interpretation utilizing dental x-ray films, panoramic, cephalometric, and other extraoral radiographs. Analyzes future trends in radiographic imaging. 1cr., 2hr. lect./lab

269 Clinical Dental Radiology and Interpretation
Prereq: DH 268 with grade C or better. Expands experience obtaining and interpreting x-rays on clients. Includes advanced radiographic identification and interpretation utilizing dental x-ray films, panoramic, cephalometric, and other extraoral radiographs. Analyzes future trends in radiographic imaging. 1cr., 2hr. lect./lab

272 Survey of Japanese Language and Culture
H. DeLeon
Surveys various aspects of Japanese culture in connection with geography, anthropology, sociology, and history. Introduces background of Japanese language. (Conducted in English.) 3cr., 3hr. lect. (AP)

273 Introduction to Japanese
H. DeLeon
Introduction to the Japanese language. (Conducted in English.) 3cr., 3hr. lect. (AP)

280 Beginning Playwriting
Prereq: ENG 100 with grade C or better, or consent.
Introduces structure, guidelines, and format of the one-act play, beginning with the conception of an idea, followed by effective outline techniques, subsequent drafts, and the final product in a polished one-act play. 3cr., 3hr. lect./lab (HE)

287 Digital Media Internship I
Prereq: DMED 193v, ENG 100, and consent. Recommended: MATH 100 or MATH 107, and BUS/COM 130. Reflects student interest area and the availability of job stations. Offers the opportunity to upgrade employment and problem-solving skills. Student, instructor, and employment supervisor jointly develop learning outcomes. The instructor and the employment supervisor jointly evaluate student. 1-3cr., 1.25hr. sem., 75 documented field experience hours per credit (1cr.=75hr., 2cr.=150hr., 3cr.=225hr.)

289 Digital Media Internship II
Prereq: DMED 193v, ENG 100, and consent. Recommended: MATH 100 or MATH 107, and BUS/COM 130. Reflects student interest area and the availability of job stations. Offers the opportunity to upgrade employment and problem-solving skills. Student, instructor, and employment supervisor jointly develop learning outcomes. The instructor and the employment supervisor jointly evaluate student. 1-3cr., 1.25hr. sem., 75 documented field experience hours per credit (1cr.=75hr., 2cr.=150hr., 3cr.=225hr.)

293 Digital Media Internship II
Prereq: DMED 193v, ENG 100, and consent. Recommended: MATH 100 or MATH 107, and BUS/COM 130. Reflects student interest area and the availability of job stations. Offers the opportunity to upgrade employment and problem-solving skills. Student, instructor, and employment supervisor jointly develop learning outcomes. The instructor and the employment supervisor jointly evaluate student. 1-3cr., 1.25hr. sem., 75 documented field experience hours per credit (1cr.=75hr., 2cr.=150hr., 3cr.=225hr.)

Directed Study (DIRS)
Prereq: Consent. See Special Curriculum section on page 52.

Drafting (DRAF)
C. ATAY
Most Drafting courses are listed as Architectural Engineering & CAD (AEC).

Drama (DRAM)
C. Gardner
101 Introduction to Drama and Theatre
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Treats representative plays from Aeschylus’ Agamemnon to Miller’s Death of a Salesman as illustrative studies of changing forms in the theatre and dramatic literature. 3cr., 3hr. lect. (CO, CG, HE)

221 Beginning Acting I
Provides individual exercises and group rehearsals of beginning acting. Emphasizes voice, movement, and relaxation. Students must perform in direction of class scenes. 3cr., 2hr. lect./2 hr. lab (FO, HE)

222 Beginning Acting II
Prereq: DRAM 221, or consent.
Continues Beginning Acting I. Expands work on voice, movement, improvisation and scene work. Requires performance of monologues and scenes from classic and contemporary plays. 3cr., 2hr. lect./2hr. lab (FO, HE)

260 Dramatic Production
Studies the process of converting the play to the performance. 3cr., 3hr. lect.

East Asian Languages (EALA)
H. DeLeon

Survey of Japanese Language and Culture
S. Han
Surveys various aspects of Japanese culture in connection with geography, anthropology, sociology, and history. Introduces background of Japanese language. (Conducted in English.) 3cr., 3hr. lect. (AP)

Economics (ECON)
C. Foreman
18 Personal Economics
Introduces ways to get your money’s worth. Explains charge accounts, borrowing, mortgages, insurance, taxes, investments, and retirement planning. Emphasizes practical examples that face the typical family. 3cr., 3hr. lect.

120 Introduction to Economics
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Introduces the way economic systems operate. Compares the American economy with other systems. Studies the operation of business. Analyzes national policies in solving the economic problems of inflation, unemployment, and foreign trade. One semester course for non-majors in economics. 3cr., 3hr. lect. (CO, CG)
130 Principles of Economics: Microeconomics*
Prereq: Placement at ENG 100, and placement at least MATH 103; or consent.
Analyzes the market mechanism, prices, competition, and the efficient allocation of scarce resources. Formulates possible solutions to contemporary economic and social issues such as world food problems, poverty and distribution of income, market power of business including multi-nationals, role of labor unions, energy crises, environmental pollution, consumerism, and welfare. 3cr., 3hr. lect.  (CO)

131 Principles of Economics: Macroeconomics*
Prereq: Placement at ENG 100, and placement at least MATH 103; or consent.
Analyzes the forces determining national and international economic performance in such areas as employment, inflation, production, money supply, and trade. Presents, in historical context, the modern economic situation. Describes the relative roles of major economic institutions such as businesses, labor unions, government agencies, international organizations, and the banks. 3cr., 3hr. lect.  (CO)

*Note: ECON 130 and 131 are both required for Economics majors and for admission to UH Manoa College of Business Administration. ECON 120, 130, or 131 may be used to meet Social Science core requirements. UH Manoa students cannot receive more than 6 credits for ECON 120, 130, and 131.

150 Personal Finance
Prereq: ENG 19 with grade C or better or placement at least MATH 22; or consent.
Introduces financial planning, money management, and tax planning. Includes financing real and personal property, purchasing insurance and managing investments.  (Crosslisted as BUS 150.) 3cr., 3hr. lect.

104 Economics

105 Introduction to Early Childhood Education
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Introduces and explores the historical roots and fundamental principles of early childhood care and programs, the variety and scope of programs in the community, issues confronting the field, and career options. 3cr., 3hr. lect.

106 Early Childhood Curriculum
Prereq: ED 105, or consent.
Offers a practical guide and overview of curriculum, developmentally appropriate practices, and basic skills needed with young children. Includes planning in the Early Childhood program to meet the needs of the child: socially, physically, emotionally, and intellectually. Discusses designing learning environments for young children and an introduction to working with children with special needs. 3cr., 3hr. lect.

110 Developmentally Appropriate Practices
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Provides a practical guide and overview of the basic awareness, attitudes, knowledge and skills necessary for working with children from birth through age eight. Introduces concepts of developmentally appropriate practices, the importance of play and inclusion of children with special needs. 3cr., 3hr. lect.

115 Health, Safety, and Nutrition for the Young Child
Prereq: ENG 22, or placement at ENG 100, or consent.
Introduces theories and practices for creating and maintaining a safe, healthy learning environment for young children and adults in group settings. Introduces guidelines and practices for providing for the nutritional needs of young children and adults in group settings. 3cr., 3hr. lect.

131 Early Childhood Development: Theory into Practice
Prereq: ENG 22, or placement at ENG 100, or consent.
Explains principles of human development from conception through early childhood. Focuses on the interrelation of physical, cognitive, emotional and social aspects of the individual during this period and how this information of development affects one’s expectations and relationship to the individual child. 3cr., 3hr. lect.

134 Introduction to Observation of Children
Recommended coreq: ED 105 and/or FAMR 231.
Introduces techniques of observing young children. Helps students develop skills in observing and recording children’s behavior accurately, descriptively, and objectively. Provides opportunity for students to expand and deepen their understanding of child growth and development. 1cr., 15hr. lect. per semester

140 Guidance of Children in Group Settings
Prereq: ED 131, or consent.
Addresses positive ways to support children’s social-emotional development. Focuses on adult-child and child-child interactions and relationships.  (Crosslisted as FAMR 140.) 3cr., 3hr. lect.

152 Early Literacy Development
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Provides an overview of the historical and contemporary perspectives on early literacy development. Includes information on current research in early literacy and language development. Explores strategies to encourage and facilitate literacy development through the teaching environment, conversation, materials, observation, assessment, planning, and family involvement. Evaluates effects of culture and family on early literacy and language development. 3cr., 3hr. lect.
170 Introduction to Working with Infants and Toddlers
Prereq: ENG 19, or placement at least ENG 22, or consent.
Provides an overview of basic skills used in working with infants and toddlers in groups. Focuses on interactive aspects of child development. Introduces infant-toddler caregiving routines and environments, and caregiver roles. Explores ways to enrich experiences and to promote strong relationships with families. 3cr., 3hr. lect.

175B Introduction to Home Visiting
Prereq: ENG 19, or placement at least ENG 22, or consent. Recommended: FAMR 231 or FAMR 131BCD preferred.
Explores child growth and development from birth to five with emphasis on establishing a partnership with families to encourage their involvement in enhancement of the child's self esteem; self-discipline; intellectual development; and physical, social, and emotional competence. Introduces principles of adult learning and effective communication skills. 1cr., 3hr. lect.

175C Home Visiting: Assessment & Recordkeeping
Prereq: ENG 19, or placement at least ENG 22, or consent. Recommended: FAMR 231 or FAMR 131BCD preferred.
Introduces and explores assessment, record keeping, and case-management skills required for home visitor programs. Examines action plans based on identification of the child and adult needs and progress. 1cr., 3hr. lect.

175D Home Visiting: Professionalism
Prereq: ENG 19, or placement at least ENG 22, or consent. Recommended: FAMR 231 or FAMR 131BCD preferred.
Explores community resources, professional ethics, personal boundaries, confidentiality, and professional development for the home visitor to meet the needs of community agencies that employ home visitors. 1cr., 3hr. lect.

190 Early Childhood Field Experience
Prereq: Permission of instructor; and ED 110 and ED 131/FAMR 231 both with grade C or better; and ENG 22 or placement in ENG 100. Recommended: ED 105
Provides a supervised work experience in an early childhood education and care setting. Supports students in integrating content knowledge with practice. Designed for those who have little or no experience in early childhood programs. Student may be required to obtain a physical or doctor’s note, and to be fingerprinted at student’s expense. 4cr., 8hr. practicum/2hr. seminar (IN)

191v Early Childhood Field Experience IB
Prereq: Permission of instructor; and ED 110 and ED 131/FAMR 231 both with grade C or better; and ENG 22 or placement in ENG 100. Recommended: ED 105
Provides a supervised work experience in an early childhood education and care setting. Supports students in integrating content knowledge with practice. Designed for those already working in an early childhood program. (May be repeated for a maximum of 12 credits.) 1-4cr., 1.5-15hr. practicum/1hr. discussion per week or 2 hrs. discussion every other week.

234B Introduction to Authentic Assessment
Prereq: Access to a group of children to observe; and ED 134; and ENG 22 with grade C or better or placement at ENG 100; or consent. Recommended: ED 106 and FAMR 231.
Examines issues of observing children and using authentic or performance assessment in a variety of settings, from family childcare to preschools and elementary classrooms. 1cr., 15hr. lect. per semester.

234D Portfolio Assessment and Planning
Prereq: Access to a group of children to observe; and ED 134; and ENG 22 with grade C or better or placement at ENG 100; or consent. Recommended: FAMR 231 and ED 106.
Examines the issues of assessment and how portfolio assessment helps in planning for children's learning in the classroom. Allows students to share ideas on how to link assessment and planning in the classroom. 1cr., 15hr. lect. per semester

245 Child, Family, Community
Prereq: ENG 22, or placement at ENG 100, or consent.
Develops communication skills in establishing effective partnership relationships with diverse families and other adults. Introduces students to the local resources available for family referral. (Crosslisted as FAMR 235) 3cr., 3hr. lect. (CO, CG)

250 Beginning Literacy Strategies
Prereq: ED 105, or consent.
Introduces developmentally appropriate literacy strategies for preschool and primary school teachers. Explores approaches for extension of these strategies by families. 1cr., 1hr. lect.

251 Development of Gross Motor Skills
Prereq: FAMR 231, or consent.
Concentrates on facilitating large muscle development in children, ages two to eight. Examines the physical development of children. Explores a wide variety of motor/movement activities for use with groups of children and the individual child. Evaluates the physical environment and equipment. 1cr., 1hr. lect.

263 Language and Creative Expression Curriculum
Prereq: ED 110 and ED 131, or consent.
Provides theoretical foundation and practice in the planning, implementation, and assessment of the language arts and creative expression curriculum. Students must have regular contact with preschool children for implementation of course assignments in a setting approved by the instructor. 3cr., 3hr. lect.
264  Inquiry and Physical Curriculum  
Prereq: ED 110 and ED 131, or consent.  
Provides theoretical foundation and practice in the planning, implementation and assessment of the inquiry and physical curriculum.  Students must have regular contact with preschool children for implementation of course assignments in a setting approved by the instructor.  3cr., 3hr. lect.

275  Inclusion of Children with Special Needs  
Prereq: ENG 22, or placement at ENG 100, or consent.  Recommended: ED 134 and FAMR 231.  
Provides introduction to legal, historical, and research information about serving young children with special needs in inclusive environments.  Introduces issues and practices associated with establishing partnerships with families and understanding collaborative relationships that contribute to meeting diverse needs of young children in inclusive settings.  Facilitates development of skills to adapt and modify the learning environment in line with developmentally appropriate practice.  Introduces traditional and alternative assessment and identifies skills necessary to facilitate successful transitions.  3cr., 3hr. lect.

281B  Early Childhood Program Admin: Licensing & Overview  
Prereq: ENG 22 or placement at ENG 100, and at least MATH 23; or consent.  
Examines licensing and its role; organizations; and roles and responsibilities of the early childhood program administrator.  Looks at and evaluates present vision and mission statements, and gives tools to develop vision and mission statements.  1cr., 3hr. lect. for 5 wks.

281C  Early Childhood Program Admin: Staff Development  
Prereq: ENG 22 or placement at ENG 100, and at least MATH 23; or consent.  
Examines hiring, grievance, and firing policies of early childhood programs.  Examines and lets student develop a staff development framework for their program.  1cr., 3hr. lect. for 5 wks.

281D  Early Childhood Program Admin: Curriculum & Environment  
Prereq: ENG 22 or placement at ENG 100, and at least MATH 23; or consent.  
Examines and analyzes early childhood curriculum and physical environments.  Lets students develop plans to improve curriculum and physical environments of individual programs.  1cr., 3hr. lect. for 5 wks.

282B  Early Childhood Program Admin: Budgets & Financial Management  
Prereq: ENG 22 or placement at ENG 100, and at least MATH 23; or consent.  
Examines principles of profit and nonprofit management, budgeting, and financial planning.  Gives students tools to develop budgets and short- and long-term financial plans for early childhood programs.  1cr., 3hr. lect. for 5 wks.

282C  Early Childhood Program Admin: Recordkeeping  
Prereq: ENG 22 or placement at ENG 100, and at least MATH 23; or consent.  
Examines and analyzes operating policies, recordkeeping practices, and staff and child evaluation procedures of early childhood programs.  1cr., 3hr. lect. for 5 wks.

282D  Early Childhood Program Admin: Advocacy  
Prereq: ENG 22 or placement at ENG 100, and at least MATH 23; or consent.  
Examines the various ways an administrator can be an advocate for the profession.  Looks at programs, accreditation, and understanding and utilizing decision-making processes at the county, state, and federal levels.  1cr., 3hr. lect. for 5 wks.

291v  Early Childhood Field Experience II  
Prereq: Permission of instructor; and ED 105, ED/FAMR 140, ED 190/191v, and ED 245/FAMR 235.  Coreq: ED 263 or 264.  Recommended: ED 115.  
Provides a culminating supervised work experience in an early childhood education and care setting.  Supports students in integrating content knowledge with practice.  (May be repeated for maximum of 8 credits.)  Responsibilities increase with each repeat.  1-4cr., 1.5-15hr. practicum/1hr. discussion per week or 2 hrs. discussion every other week.  Note: Students may be required to obtain a physical or doctor’s note and to be fingerprinted, all at student’s expense.

293  Child Development Associate Certificate  
Prereq: Certificate of Completion in Early Childhood Education and/or consent.  
Requires the observable performance and assessment of the six Child Development Associate (CDA) competency areas in the classroom.  Includes a classroom placement which provides for a minimum of 50 percent teaching time for a demonstration of these competencies:  
a) organize a learning environment;  
b) advance physical and mental abilities;  
c) develop child’s self-esteem;  
d) build healthy group environment;  
e) coordinate home and center experiences; and  
g) plan cooperatively.  3cr., 3hr. lect.

Electricity (ELEC)  
C. Atay

15  Electrical Safety  
Explores fundamentals of electrical safety in the home, business, and industry.  Discusses concepts of personal safety, periodic inspection, and regular maintenance.  1cr., 2hr. lect./lab

20  Introduction to Electricity  
Recommended: MATH 50 or 50T and 50Y.  
Examines residential, commercial, and industrial wiring systems.  Studies current, voltage, resistance, and Ohm’s Law.  Discusses magnetism, electrical measurements, DC circuits, induction, and capacitance.  3cr., 3hr. lect.

23  Electrical Wiring I  
Introduces principles of switching, circuits, code requirements, and appliances.  Develops skill in practical applications.  2cr., 3hr. lect./lab

25  Electrical Wiring II  
Prereq: ELEC 23, or consent.  
Studies the electrical system of the typical single-family residential dwelling.  Examines how local and national codes apply to residential units.  2cr., 3hr. lect./lab
101 Introduction to Electronics Technology
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: ICS 101 or equivalent.
Introduces applications of arithmetic and mathematics to electronic and computer technology, engineering notation, electrical units, schematic diagrams, fundamentals of electronic and computer technology, and electrical components. Demonstrates theory and application of electronic measuring instruments and the construction of circuits. (Letter grade only.) 3cr., 4hr. lect./lab

102 Instrumentation for Engineering Technicians
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: ICS 101 or equivalent.
Introduces fundamental principles and applications of optics, electronics, engineering, and computer software integral to the operation of instrumentation used in a variety of disciplines and research areas. Emphasis will be on systems used for data collection, imaging, and image processing, including examples drawn from local high-tech industries. (Letter grade only.) 4cr., 6hr. lect./lab

105 Electronic Circuit Analysis I
Prereq: ETRO 101 with grade C or better, or consent.
Introduces topics including Ohm’s Law, Kirchhoff’s Laws, Networks with DC voltage sources, circuit analysis, Thevenin’s Theorem and Maximum Power Theorems, and use of meters. 4cr., 6hr. lect./lab

106 Electronic Circuit Analysis II
Prereq: ETRO 105, or consent.
Coreq or prereq: MATH 135, or consent.
Presents applications of network theorems, sinusoidal waveforms, phasor quantities, impedance, Kirchhoff’s Laws, power, response, AC meters and instruments. 4cr., 3hr. lect./3hr. lab

110 Electronic Technology I
Prereq: ETRO 105, and MATH 107 or 135 or higher, or consent.
Introduces topics including basic theory and operations of solid-state devices including diodes, bipolar transistors, field effect transistors, SCRs, and zener diodes. Covers electronic circuits performing limiting, rectifying, and amplification. 4cr., 6hr. lect./lab

112 Electronic Technology II
Prereq: ETRO 110 with grade C or better, or consent.
Continues the study of electronic devices and circuits including design of amplifiers, cascade amplifiers, power amps, FET amps, operational amplifiers, IC oscillators, timing circuits and introduction to communication circuits. 4cr., 6hr. lect./lab

130 Computer Hardware & Operating Systems
Prereq: ETRO 101 with grade C or better, or consent.
Introduces the function of computer hardware and software components. Suggests best practices in maintenance and safety issues. Covers computer assembly and configuration. Includes computer operating system installation and troubleshooting of hardware and software problems. Provides an introduction to basic networking concepts. Prepares students for Comp TIA A+ certification. 4cr., 6hr. lect./lab

140 Computer Networking I
Prereq: ETRO 101 with grade C or better, or consent. Recommended: PHYS 105.
Introduces network terminology, protocols, and standards. Covers the OSI model, basic concepts of routers and routing, and IP addressing including subnet masks. Defines and describes different network topologies. Develops configuration and router skills. 4cr., 6hr. lect./lab

160 Laser Safety and Applications
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100; and MATH 25 or higher; or consent. Recommended: ICS 101.
Introduces students to lasers and laser safety. Introduces physical properties of light and their applications in lasers, effects of laser radiation on the anatomy and physiology or eyes and other human organs, and protective measures. Explains proper use of lasers and safety practices. Teaches how to determine necessary safety measures using measurements and calculations. 1cr., 1hr. lect.

161 Introduction to Optics & Photonics
Studies the physics of light, geometric optics, lenses, mirrors, polarizing lenses, interference/diffraction waves, laser physics, optical imaging, and bio-photonics. Provides lab experiments and projects to reinforce the theory. 3cr., 4hr. lect./lab

193v Internship I
Prereq: ETRO 101 with grade C or better, or consent.
Introduces the student to the work place, the student’s major interest area, and the availability of job stations. Ugrades opportunities for specific skills dependent upon the job station. Provides work practicum credits based on one credit for each 75 hours of supervised work. Requires a work-related project during which the student will demonstrate competency in acquired employability skills. Student, instructor, and employment supervisor jointly develop learning outcomes. Instructor and employment supervisor jointly evaluate student. (Letter grade only.) 1-3cr., 75hr./cr.
201 Digital Computer Technology I
Prereq: ETRO 101 with grade C or better, or consent.
Introduces digital computer technology including number systems and codes, Boolean algebra, logic circuits, multivibrator circuits, data control circuits, and troubleshooting of digital circuits. 4cr., 6hr. lect./lab

205 Digital Computer Technology II
Prereq: ETRO 201 and at least MATH 107 or 135; or consent.
Introduces digital computer and microprocessor technology including memory circuits, microprocessor architecture, addressing modes, programming, stack operations, subroutines, input and output operations, microcomputer subsystems and interfacing, troubleshooting of computer circuits. 4cr., 6hr. lect./lab

240 Computer Networking II
Prereq: ETRO 140, or consent.
Offers intermediate level coursework in computer networking. Introduces basics of Ethernet switching. Covers intermediate routing skills including variable length subnet masking, routing protocols, and WAN technologies topics. Prepares students for the Cisco Certified Networking Associate (CCNA) exam. 4cr., 6hr. lect./lab

285 Windows System Administration and Security
Prereq: ETRO 130 and at least MATH 107 or 135; or consent.
Introduces multiuser, multitasking networking operating systems. Explores characteristics of Windows NT, 2000, and XP network operating systems. Covers installation, security, back-up procedures, and remote access. Introduces the Linux operating system in a network environment. 3cr., 4hr. lect./lab

293v Internship II
Prereq: ETRO 193v, or consent.
Introduces the student to the workplace, the student’s major interest area, and the availability of job stations. Upgrades opportunities for specific skills dependent upon the job station. Requires a workplace-based project for which the student evaluates and prepares a written proposal as a solution to specific job-related problems. Provides work practicum that emphasizes the employability skills objectives adopted as standards by the Electronic Industry Association (EIA). Instructor and employment supervisor jointly develop learning outcomes. Instructor and employment supervisor jointly evaluate student. (May be repeated for a maximum of 6 credits.) 1-3cr., 75hr./cr.

298 Special Projects in Electronics Technology
Prereq: ETRO 105, 130, 140, and 201; and MATH 107 or 135 or higher; or consent.
Introduces special topics in electronic and digital computer technology. Creates, designs, and builds an electronic capstone student project under guidance of the instructor. Provides students the opportunity to gather the required schematics, components, and devices for the project. Allows option to repair or restore an existing electronic device. Requires the student meet each week with instructor. 4cr., 6hr. lect./lab

Energy (ENRG)

C. Atay

20B Energy Conservation in the Home
Covers techniques for conducting an energy audit of the home to identify areas of energy loss or waste, including water heaters, ceiling and wall insulation, major and minor appliances, window reflective films, roof overhang, and window shading. 1cr., 15hr. lect./lab

20C Energy Conservation in the Condominium
Covers techniques for conducting an energy audit of the condo unit and facility to identify areas of energy loss or waste, including water supply systems, air conditioning, infiltration and exfiltration system, insulation, and windows. 1cr., 15hr. lect./lab

101 Introduction to Sustainable Technology
Prereq: ENG 19 with grade C or better or placement at least ENG 22, and MATH 1 or placement at least MATH 22; or consent. Recommended: ICS 101 or BUSN 150, and placement at ENG 100.
Introduces alternative methods for meeting long term energy needs, identifies and explores local resources including demand-side management of conventional gas and electric power and sustainable energy resources such as solar, wind, biomass, small hydroelectricity, geothermal, ocean thermal energy conversion, and alternative transportation fuel options. 3cr., 3hr. lect.

102 Energy Management Systems
Prereq: ENRG 101 (or concurrent), or consent.
Introduces methods for meeting long term energy conservation, identifies and explores alternative monitoring and control systems and local energy efficient devices, including demand-side management of conventional gas and electric power as well as analysis of available new and retrofitted energy systems and their place in the integrated resource planning program in Maui County. 3cr., 3hr. lect.
103 Energy Production Systems  
**Prereq:** ENRG 101 (or concurrent), or consent.  
Introduces theoretical concepts and practical applications of sustainable energy systems. Develops knowledge of photovoltaic, thermal, wind, hydro, ocean thermal, fossil, ocean wave, and absorption systems, with emphasis on solutions for residential and commercial applications in Hawai‘i. 3cr., 3hr. lect.

104 Energy Storage and Control  
**Prereq:** ENRG 101 (or concurrent), or consent.  
Introduces theoretical concepts and practical application of energy storage and control systems. Develops knowledge of batteries, thermal energy storage, pumped hydro, flywheel technology, and phase change storage. Discusses control, monitoring, testing, and safety equipment for energy storage systems, with emphasis on solutions for residential and commercial applications in Hawai‘i. 3cr., 3hr. lect.

105 Biomass Energy Processes  
**Prereq:** ENRG 101 (or concurrent), or consent.  
Introduces theoretical concepts and practical applications of methods for meeting long-term energy needs on Maui and in the State of Hawai‘i through the utilization of biomass to produce energy and environmentally friendly by-products. 3cr., 3hr. lect.

193v Internship in Sustainable Technology  
**Prereq or coreq:** ENRG 101, 102, 103, 104, or 105, and consent.  
Recommended: ENG 100, and ICS 101 or BUSN 150.  
Introduces student to the workplace on a job within the student’s area of interest and preparation. Student and instructor jointly develop learning outcomes, and the instructor and the employment supervisor jointly perform evaluation.  
(May be repeated for a maximum of 8 credits.) 1-4cr., 75hr. supervised work per credit

100 Composition I  
**Prereq:** ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.  
Discovers and applies the concepts of purpose, audience, and tone in writing. Emphasizes evaluating written texts and writing various types of essays, including writing from sources. Focuses on critical thinking. 3cr., 3hr. lect./lab (FW)

102 College Reading Skills  
**Prereq:** ENG 21 with grade C or better, or placement at ENG 100 or 102, or consent.  
Aims to develop higher powers of comprehension, recall, interpretation, perception, and appreciation. Emphasizes improved study skills, depth efficiency, and discrimination in reading. Develops flexibility of speed adjusted to the material and purpose of reading. Develops the interest and power to plan a self-improvement program for continued growth in reading at mature levels. This course is intended for students who are reading at or above their grade level and who wish to improve skills of comprehension and critical thinking. 3cr., 3hr. lect./lab

104 Introduction to Creative Writing  
**Prereq:** ENG 21 with grade C or better, or consent.  
Explores the principles and practice of creative writing through readings and composition in several major genres. 3cr., 3hr. lect./lab (HE)

55 Business Communications - Written  
**Prereq:** ENG 19 with grade C or better, or placement at ENG 22, or consent.  
Recommended coreq: ENG 21.  
Focuses on business writing strategies and techniques. Emphasizes various forms and styles of business correspondence. Improves sentence level skills for business students.  
(Letter grade only.) 3cr., 3hr. lect./lab
209 Business & Managerial Writing
Prereq: ENG 100 with grade C or better, or consent.
Focuses on the skills needed for effective business and managerial written communication. Emphasizes informative, analytical, persuasive, evaluative, and collaborative writing. Gives practice in writing memos, business letters, directives and instructions, short reports, and formal research reports. 3cr., 3hr. lect.

210 Expository Writing II
Prereq: ENG 100 with grade C or better, or consent.
Continues work in expository writing. Practices inventing, developing, organizing, and communicating complex theses and analyses. Emphasizes critical thinking and research in students’ field of study. 3cr., 3hr. lect./lab

250 American Literature
Prereq: ENG 100 with grade C or better, or consent.
Studies major works of American fiction, non-fiction, drama, and poetry. 3cr., 3hr. lect.
Note: These courses, ENG 251-256 and ENG 257EFR, satisfy the 6-credit requirement for sophomore literature at the University of Hawai‘i, a prerequisite for upper division English courses. (CO)

251 Major Works of British Literature to 1800
Prereq: ENG 100 with grade C or better, or consent.
Studies major works of British fiction, non-fiction, poetry, and drama from the Middle Ages to 1800. 3cr., 3hr. lect. (CO)

252 Major Works of British Literature after 1800
Prereq: ENG 100 with grade C or better, or consent.
Studies major works of British fiction, non-fiction, drama, and poetry from 1800 to the present. 3cr., 3hr. lect. (CO)

253 World Literature
Prereq: ENG 100 with grade C or better, or consent.
Studies and analyzes internationally recognized literary works of major world cultures (Eastern) from ancient times to present. 3cr., 3hr. lect. (CO)

254 World Literature
Prereq: ENG 100 with grade C or better, or consent.
Studies and analyzes internationally recognized literary works of major world cultures (Western) from ancient times to present. 3cr., 3hr. lect. (CO)

255 Types of Literature
Prereq: ENG 100 with grade C or better, or consent.
Studies, analyzes, and critiques major European and American short stories and novels. 3cr., 3hr. lect. (CO)

256 Types of Literature
Prereq: ENG 100 with grade C or better, or consent.
Studies, analyzes, and critiques major works of European and American drama, biography, and poetry. 3cr., 3hr. lect. (CO)

257 Themes in Literature: Special Topics
Prereq: ENG 100 with grade C or better, or consent.
Studies and analyzes universal problems in selected literary works of various types, cultures, and periods. Presents topics, which will vary with student interest and availability of faculty. 3cr., 3hr. lect. (CO)

257F Themes in Literature: Women Writers on Women
Prereq: ENG 100 with grade C or better, or consent.
Studies, analyzes, and critiques poems, short stories, prose, drama, and novels written by women who focus on women persons. Explores themes of gender such as family relationships, motherhood, sexuality, women and nature, women and politics, women and spirituality, women and creativity, and myths of femaleness. Studies and analyzes universal problems in selected literary works. 3cr., 3hr. lect. (CO)

257R The Bible as Literature
Prereq: ENG 100 with grade C or better, or consent.
Presents an introduction to major literary genres, styles, techniques and themes in the Old and New Testaments. Emphasizes poetry, short story, fiction, drama, history, tragedy, myth, biography, legend, parable, proverb, psalm, epic, heroic narrative, historical romance, gospel, epistle, prophetic writing, and apocalyptic writing. Studies and analyzes universal problems in selected literary works. 3cr., 3hr. lect. (CO)

316 Advanced Research Writing
Prereq: ENG 209 or 210 with grade C or better, or consent. Recommended: One of the ENG 250 series: 250, 251, 252, 253, 254, 255, 256, 257, 257E, 257F, or 257R.
Provides advanced knowledge in how to plan, develop, organize, and edit writing projects with clarity and precision. Emphasizes critical thinking skills, social, ethical, and political argument, and the ability to write a variety of work, including research projects in specific fields of study using appropriate documentation styles. 3cr., 3hr. lect.
Family Resources (FAMR)

L. Stein, E. Yamashita

140 Guidance of Children in Group Settings
Prereq: ED 131, or consent.
Addresses positive ways to support children’s social-emotional development. Focuses on adult-child and child-child interactions and relationships. (Crosslisted as ED 140.) 3cr., 3hr. lect.

230 Human Development
Prereq: ENG 22 or higher, or consent.
Studies concepts, issues, and theories of human growth and development from conception to death. Explores systems approaches to inquiry into factors affecting growth and development. 3cr., 3hr. lect. (IN)

235 Child, Family, Community
Prereq: ENG 22, or placement at ENG 100, or consent.
Develops communication skills in establishing effective partnership relationships with diverse families and other adults. Introduces students to the local resources available for family referral. (Crosslisted as ED 235.) 3cr., 3hr. lect. (CO, CG)

244 Introduction to the Aging Process
Prereq: FAMR 232, or consent.
Studies the biological, emotional, and psychological aspects of the aging process. Discusses current attitudes about older people. Enables students to recognize needs of older adults. Discusses policy and legislation affecting older people. 3cr., 3hr. lect. (IN)

245 Special Needs of Older Adults
Prereq: FAMR 232 or 244, or consent.
Explores resources available to older adults. Introduces students to various agencies and programs available in the community. Enables students to recognize the needs of the older adult. Enables the student to interview and assess older adults. 3cr., 2hr. lect./2hr. lab

Fashion Technology (FT)

C. Maeda

25 Ready-to-Wear Clothing Production
Prereq: FT 216, or consent.
Explores efficient and economical techniques in fabric layout, cutting, and sewing. Offers practice in aloha shirt and blouse construction. 3cr., 2hr. lect./3hr. lab

40 Fabric Analysis
Explores the latest fabrics on the market. Explores how fiber content, fabric development, and color application affect fabric care. 3cr., 3hr. lect.

60 Advanced Pattern Making
Prereq: FT 215, or consent.
Develops skill in making patterns for children’s and women’s apparel. Studies advanced pattern design and construction techniques using quarter and half scale pattern blocks. 3cr., 2hr. lect./3hr. lab

61 Advanced Pattern Drafting & Clothing Construction
Prereq: FT 215 and FT 217; or consent.
Coreq: FT 60, or consent.
Explains development of a basic pattern from personal measurements. Explores flat pattern designing from illustration and individual student sketches. Emphasizes accurate pattern and garment construction to fit the figure. 3cr., 5hr. lect./lab

90 Special Topics in Fashion Technology
Provides knowledge and training in new techniques and/or specialized areas in the sewing industry that are not included in the basic fashion technology curriculum. (May be repeated without limit for credit.) 1-4cr.

Special Topic: Sewing Activewear
Prereq: FT 113 and FT 115; or consent.
Provides specialized training in the design and construction techniques used in the development of active sportswear. Stresses ready-to-wear production techniques. 3cr., 5hr. lect./lab

Special Topic: Home Furnishings
Prereq: FT 25, or consent.
Provides specialized training in design, measurement and construction techniques used in the production of draperies, pillows, table linens, bed linens, slipcovers, and other home furnishings. 3cr., 5hr. lect./lab

Special Topic: Draping
Prereq: FT 215, or consent.
Introduces the fundamentals of draping on the standard dress form. Practices interpretation of design details through draping. 3cr., 5hr. lect./lab

111 Art and Design in Fashion
Surveys fashion as it relates to art and design. Line, color, balance, and proportion are studied providing guidelines to understanding fashion and how it communicates personal image to society. 3cr., 3hr. lect. (HE)

113 Clothing Construction Methods I
Introduces sewing tools and equipment. Treats selection and adjustment of basic commercial patterns and construction of clothes from these patterns to fit figures. 3cr., 5hr. lect./lab

115 Clothing Construction Methods II
Prereq: FT 113, or consent.
Explores custom sewing techniques using various kinds of fabrics. Emphasizes accuracy and neatness in pattern alteration and garment construction. 3cr., 5hr. lect./lab

125 Fashion Show Production
Provides basic information and practical experience in the preparation and production of a fashion show. (May be repeated for a maximum of 9 credits.) 1cr., 2hr. lect./lab
215 Flat Pattern Making I  
*Prereq: FT 113, or consent. Coreq: FT 217.*  
Introduces principles of pattern making for women’s apparel through the manipulation of basic slopers. Covers the development of bodices, skirts, sleeves, and collars. 3 cr., 5 hr. lect./lab

216 Fashion Design & Sketching  
*Prereq: FT 111, or consent.*  
Introduces basic techniques for drawing fashion figures. Treats use of pen and ink, and water colors. Explains sketching the design. 3 cr., 3 hr. lect. (HE)

217 Flat Pattern Making II  
*Prereq: FT 113, or consent. Coreq: FT 215.*  
Explores garment development using the flat pattern method. 3 cr., 5 hr. lect./lab

Food Science & Human Nutrition (FSHN)

18 Introduction to Nutrition  
Introduces study of nutrition. Includes characteristics of major nutrient groups and their relationship to diet and health. Emphasizes application of these principles to purchasing, preparation, and service of nutritious foods. *Meets ACF certification requirement for nutrition.* 1 cr., 1.5 hr. lect./lab

185 Food Science and Human Nutrition  
*Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.*  
Integrates natural science concepts basic to the study of human nutrition. Emphasizes nutrient requirements of healthy individuals, nutrient categories and characteristics, physiological functions, and food sources. Includes review and adaptation of dietary practices to reflect current nutritional issues. 3 cr., 3 hr. lect. (IN)

285 The Science of Human Nutrition  
*Prereq: ENG 22 with grade C or better or placement at ENG 100, and MATH 22 or placement at least MATH 23; or consent.*  
Integrates basic concepts of science with the study of human nutrition. Introduces nutrients and what food and nutrients do for humans. Looks at how healthy people can best get the amounts of nutrients and food they need throughout their lifetime. Studies how people and the environment change nutrient content. 3 cr., 3 hr. lect. (IN)

286 Sports Nutrition  
*Prereq: FSHN 185, or consent.*  
Introduces nutritional concerns of the athlete in relation to sports performance. Covers the carbohydrate, fat, protein, water, and vitamin/mineral requirements of the athlete and how to make wise food choices. Looks at fad diets, facts and fallacies about supplement use, pre- and post-event meals, and body weight and composition. Reviews the relationships among nutrition, exercise, and health. 3 cr., 3 hr. lect. (Formerly FSHN 290.)

Geographic Information Systems (GIS)

150 Introduction to GIS/GPS  
*Prereq: ICS 101 or BUSN 150 either with grade C or better; or consent. Recommended: Familiarity with computer databases.*  
Introduces applications of geographic information systems (GIS) with a special emphasis on using ArcView GIS. Includes database construction and techniques for spatial data manipulation, analysis, and display. Teaches use of global positioning system (GPS). Explores cross-disciplinary applications in the natural and social sciences. *Cross-listed as ICS 150.* 4 cr., 6 hr. lect./lab

101 The Natural Environment  
Surveys the natural environment: weather, climate, soil, vegetation, and landforms, with emphasis on Hawai‘i. Lab optional. 3 cr., 3 hr. lect. (EA, EG)

101L The Natural Environment Laboratory  
*Prereq: GEOG 101 (or concurrent), or consent.*  
Introduces the geographer’s tools: globes, atlases, maps, and aerial photographs. Uses laboratory investigation techniques to understand concepts of physical geography. Special emphasis on Hawai‘i and on human modification of the environment. 1 cr., 3 hr. lab (EA, EG, EL)

102 World Regional Geography  
*Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.*  
Surveys the world’s major cultural regions. Explores economic, environmental, social, and political conditions from a geographical perspective. 3 cr., 3 hr. lect. (CO, CG, FG)

122 Geography of Hawai‘i  
*Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.*  
Surveys the Hawaiian Islands through the lens of geographic enquiry. Introduces the unique characteristics of the natural and cultural landscapes of Hawai‘i. 3 cr., 3 hr. lect. (CO, HI)

151 Geography in Contemporary Society  
*Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.*  
Introduces elements of population, economic, and cultural geography. Includes urban studies and resource management. Explores applications to contemporary issues of developed and less developed countries. 3 cr., 3 hr. lect (CO)
Hawaiian Studies (HWST)
K. Dukelow, K. Ka‘eo, J. Kaniaupio-Crozier, S. K. Raymond

100B Introduction to Hawaiian Culture: Communication - Basic Language and Phrases
Prereq: ENG 22 with grade C or better, or placement at ENG 100, and MATH 1 or placement at least MATH 22; or consent.
Provides an orientation to traditional and contemporary Hawaiian practices and values. 1cr., 1hr. lect.  (CO, IN, HI)

100C Introduction to Hawaiian Culture: Worldwide - Values, Folklore, and Cultural Practices
Prereq: ENG 100 with grade C or better, or consent.
Surveys Hawaiian literature, including prose narration and poetry with reference to Polynesian and world themes and forms from pre-contact to discovery. Introduces a full range of Hawaiian stories, chants, poems, songs, and sayings which have been translated into English. 3cr., 3hr. lect.  (CO, HI)

100D Introduction to Hawaiian Culture: Landscape - Historical Events, Physical Features, and Unique Flora and Fauna of Maui and Hawai‘i
Prereq: ENG 22 with grade C or better, or placement at ENG 100, and MATH 1 or placement at least MATH 22; or consent.
Introduces the unique aspects of Hawai‘i and Hawaiian culture in relation to the larger Pacific, including geography, origins, language, religion, land, art, and history. 3cr., 3hr. lect.  (AP, CO, HI)

107 Hawai‘i: Center of the Pacific
Prereq: HAW 101, or consent.
Examines culture of Hawaiian people as expressed in home and family. Provides understanding of the family as the basis of larger Hawaiian society. Compares and contrasts both ancient and modern aspects of the Hawaiian family. Uses Hawaiian terminology. 3cr., 3hr. lect.  (HI, CO)

Geology & Geophysics (GG)
D. Grooms

101 Introduction to Geology
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, and MATH 1 or placement at least MATH 22; or consent.
Presents principles of physical geology including the composition and structure of the earth, its evolution over geologic time, and processes shaping the earth's crust including continental drift, volcanism, earthquakes, and erosion.  Field trips. 4cr., 3hr. lect./3hr. lab, 1 all-day field trip  (EA, EL, EG)

103 Geology of the Hawaiian Islands
Prereq: HAW 101, or consent.
Surveys Hawaiian geology and geologic processes. Includes origin of the Hawaiian Islands, volcanism, rocks and minerals, landforms, stream and coastal processes, landslides, earthquakes and tsunami, groundwater, and geologic and environmental hazards.  Field trips. 3cr., 3hr. lect.  (EA, HI)

Hawaiian (HAW)
K. Dukelow, K. Ka‘eo, J. Kaniaupio-Crozier, S. K. Raymond

101 Elementary Hawaiian I
Prereq: HAW 101, or consent.
Introduces speaking, reading, and writing elementary Hawaiian. Treats structural points inductively. Devotes four out of five hours to drill and practice. Daily lab work determined by individual need. 4cr., 5hr. lect./lab  (CO, IN, HI)

102 Elementary Hawaiian II
Prereq: HAW 101, or consent.
Continues HAW 101 instruction to write, speak, and read Hawaiian. Devotes four out of five hours to drill and practice. Daily lab work determined by individual need. 4cr., 5hr. lect./lab  (CO, IN, HI)

104 Hawai‘i: Language Through Hula
3cr., 3hr. lect.  (CO, IN, HE, HI)

201 Intermediate Hawaiian I
Prereq: HAW 102, or consent.
Continues HAW 102. Uses advanced Hawaiian grammatical structure with emphasis placed on speaking Hawaiian. Practices translation of materials from classical Hawaiian literature. Devotes two out of five hours to drill and practice. Daily lab work determined by individual need. 4cr., 5hr. lect./lab  (CO, IN, HI)

202 Intermediate Hawaiian II
Prereq: HAW 201, or consent.
Introduces further advanced Hawaiian grammatical structures with emphasis placed on speaking Hawaiian. Drills translating materials from classical Hawaiian literature. Devotes two of five hours to drill and practice. Daily lab work determined by individual needs. 4cr., 5hr. lect./lab  (CO, IN, HI)

211 Hawaiian Conversation
Prereq: HAW 201, or consent.
Practices systematic control of spoken Hawaiian. Further develops vocabulary for accurate, mature expression. 3cr., 3hr. lect.  (CO, IN, HI)

261 Hawaiian Literature in Translation
Prereq: ENG 100 with grade C or better, or consent.
Surveys Hawaiian literature, including prose narration and poetry with reference to Polynesian and world themes and forms from pre-contact to discovery. Introduces a full range of Hawaiian stories, chants, poems, songs, and sayings which have been translated into English. 3cr., 3hr. lect.  (CO, HI)

262 Hawaiian Literature
Prereq: HAW 202 and 261 both with grade C or better, or consent.
Surveys and analyzes the literary genres from the Bible to kanikau. Features the selected works of American missionaries and Hawaiian authors emphasizing the period following discovery (1778-79), into the 19th and 20th centuries. Course uses Hawaiian language texts. Course conducted in English. 3cr., 3hr. lect.  (CO, HI)
205 Hawaiian Music in Action
A Mele ‘Aina
E Mele Pili Kanaka
I Other
Prereq: HAW 102, or consent.
Teaches Hawaiian songs as a means of strengthening knowledge of language, poetry, and culture. Conducted primarily in Hawaiian. (May be repeated for credit if subletters are different.)
2cr., 2hr. lect./lab (HE, HI)

211 Hawaiian Ethnobotany
Identifies endemic, indigenous, and Polynesian introduced flora of Hawai‘i. Examines the many uses of Hawai‘i’s flora by the indigenous people. Reveals the relationship of gods/plants/man, and connects belief and practices with the intentional migration of specific plants. (Crosslisted as BOT 105). Meets Social Science requirement, not Natural Science requirement. 3cr., 3hr. lect./lab (CO, EA, HI)

213 Hawaiian Ethnozoology
Prereq: HAW 101, or consent.
Surveys and identifies Hawaiian fishes, birds, and other creatures, and their place in Hawaiian culture. Explores traditional methods of capture, practical uses, and conservation techniques. Uses Hawaiian terminology. 3cr., 3hr. lect. (EA, HI)

231 Hawaiian Culture
Studies the culture of ancient Hawai‘i. Examines values, basic social relationships, religion, customs, and aspects of material culture. Provides an awareness and understanding of modern Hawaiian cultural pluralism. 3cr., 3hr. lect. (CO, HE, HI)

262 Pana Maui: Maui’s Sacred Hawaiian Places
Prereq: HWST 107 or 111 or 270; and HAW 102; or consent.
Examines the sacred Hawaiian places of Maui, including accounts of mythical heroes, heiau, fishponds, wind and rain names, and their metaphoric value to ancient and modern Hawaiian culture. Uses Hawaiian terminology. 3cr., 3hr. lect. (CO, HE, HI)

270 Hawaiian Mythology
Prereq: HWST 107 or HAW 102, or consent.
Surveys the gods, aumakua, kupua, mythical heroes, heroines, and their kinolau as the basis of traditional Hawaiian metaphor. 3cr., 3hr. lect. (CO, HE, HI)

31 First Aid & Safety
Prepares people to navigate the health and social services systems; provides a knowledge foundation and practical skills base. Prepares the navigator to assist patients in various systems in search of appropriate diagnosis, treatment, and resolution. 3cr., 3hr. lect. (Crosslisted as HSER 101).

125 Survey of Medical Terminology
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Surveys medical terminology including: prefixes, suffixes, and work roots; pronunciation, spelling and definition of selected medical works dealing with all human body systems; commonly used abbreviations; and use of the medical dictionary. 1cr., 1hr. lect.

150 Introduction to the Study of Disease
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Introduces basic concepts and characteristics of the disease processes. Discusses diseases related to specific body systems. 1cr., 3hr. lect. for 5 wks.

159 Exercise Physiology
Studies impact of exercise on the structure and functioning of the human body. Looks at various forms of exercise, e.g., aerobic, anaerobic, strength, and endurance training. Studies diet and exercise in terms of energy requirements and fuel sources, body composition, and weight control. Evaluates impact of exercise on chronic disease risk factors. 4cr., 3hr. lect./3hr. lab

196 Health: Principles of Well-Being
Prep: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Emphasizes physiological well-being and methods of preventing chronic illness through principles of maintaining wellness. Studies theories of emotional and physical wellness and applies them to the student’s life. Studies exercise and nutrition along with mental health and their interdependence. 3cr., 3hr. lect.
History (HIST)

B. Kikuchi, D. Pyle

151 World Civilization I  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Surveys spread of civilization from its Near Eastern origins, with emphasis upon cultural contributions from Egypt, Mesopotamia, India, China, Japan, Greece, Rome, and Post-Roman Europe up to 1650.  3cr., 3hr. lect. (CO, CG, FG)

152 World Civilization II  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Treats development of civilization since 1650 with emphasis upon the expansion of Western influence throughout the world, and upon the political, economic, and cultural revolutions in the North Atlantic Community, Africa, and Asia.  3cr., 3hr. lect. (CO, CG, FG)

241 Civilizations of Asia I  
Prereq: ENG 100 (or concurrent), or consent.  
Interprets and compares the development and interaction of the political, economic, and cultural elements in the major civilizations of Asia from earliest times to contact with the West.  3cr., 3hr. lect. (AP, CO)

242 Civilizations of Asia II  
Prereq: ENG 100 (or concurrent), or consent.  
Surveys the impact of Western civilization upon major civilizations of Asia and the Asian response to this impact.  3cr., 3hr. lect. (AP, CO)

253 Contemporary World History  
Prereq: HIST 152, or consent.  
Studies contemporary world history from World War II to the present.  Emphasizes the historical background of major political, social, intellectual, and economic events leading to a better understanding of world issues today.  3cr., 3hr. lect. (CO, CG)

281 Introduction to American History  
Prereq: ENG 100 (or concurrent), or consent.  
Develops understanding of the progress of American culture up to the Civil War, an insight into America’s heritage, and a sensitivity to its ideals and realities.  3cr., 3hr. lect. (CO)

282 Introduction to American History  
Prereq: ENG 100 (or concurrent), or consent.  
Develops understanding of the progress of American culture since the Civil War, an insight into America’s heritage, and sensitivity to its ideals and realities.  3cr., 3hr. lect. (CO)

284 History of Hawai’i  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Emphasizes the history of Hawai’i since the time of European contact.  3cr., 3hr. lect. (CO, HI)

288 History of the Pacific Islands  
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Recommended: HIST 152 or 153, or ANTH 200.  
Surveys the cultural areas of the Pacific from pre-contact to present day.  Covers prehistoric migrational patterns, historical movements, and present day distributions, including western colonization and current problems.  (Crosslisted as ANTH 235.)  3cr., 3hr. lect. (AP, CO)

Hospitality & Tourism (HOST)

L. Lui, L. Peros

20 Orientation to the Travel Industry  
Prereq: ENG 15, or placement at least ENG 19, or consent.  
Recommended: BUSN 121.  
Provides an overview of the travel industry and examines employment opportunities in the field of hospitality and tourism.  3cr., 3hr. lect.

101 Introduction to Hospitality & Tourism  
Prereq: HOST 20 with grade C or better, and ENG 19 with grade C or better or placement at least ENG 22; or consent.  
Recommended: BUSN 121.  
Provides an overview of the travel industry and related major business components.  Analyzes links between hotel, food, transportation, recreation, and other industries comprising tourism.  3cr., 3hr. lect.

150 Housekeeping Operations  
Prereq: HOST 101 (or concurrent), and ENG 19 with grade C or better or placement at least ENG 22; or consent.  
Recommended: BUSN 121.  
Studies the professional management of housekeeping operations.  Includes planning, organizing, staffing, and controlling techniques required to assure quality service.  3cr., 3hr. lect./disc.

152 Front Office Operations  
Prereq: HOST 101 (or concurrent), and ENG 19 with grade C or better or placement at least ENG 22 or 55; or consent.  
Concentrates on the human relations skill necessary for effective guest and employee relations and the technical skills necessary to operate a manual, mechanical, or computerized front office operation.  3cr., 3hr. lect./lab/disc.

154 Food & Beverage Operations  
Prereq: HOST 101 (or concurrent), and ENG 19 with grade C or better or placement at least ENG 22 or 55; or consent.  
Introduces basic principles of food production and service.  Provides a basis for understanding the various challenges and responsibilities involved in managing a food and beverage operation.  3cr., 3hr. lect./disc.

250 Hospitality Sales & Marketing  
Prereq: CA in Hospitality & Tourism, or consent.  
Provides students with basic knowledge and practical experience to develop strategic and operating marketing plans for hospitality properties.  Emphasizes the marketing orientation as a management philosophy that guides the design and delivery of guest services.  Examines the dynamic relationship between hospitality marketing and daily operations.  3cr., 3hr. lect./disc.

260 Hospitality Law  
Prereq: CA in Hospitality & Tourism, or consent.  
Provides an awareness of the rights and responsibilities that the law grants to or imposes upon a hotelkeeper.  Illustrates the possible consequences of failure to satisfy legal obligations.  3cr., 3hr. lect./disc.
116  Hospitality & Tourism

270 Hospitality Management
Prereq: CA in Hospitality & Tourism, or consent.
Introduces, examines, and explains the basic principles of supervision and management in the hospitality industry. Focuses on the elemental roles, functions, and responsibilities shared by supervisors and managers. Explores rudimentary skills and techniques that must be employed in a day-to-day work setting to achieve positive, productive results. 3cr., 3hr. lect./lab/disc.

293v Hospitality Internship II
Prereq: C.A. in Hospitality & Tourism and HOST 193v; or consent.
Introduces the student to the work place within the student’s major area of interest. Provides work practicum which emphasizes hospitality industry employability skill objectives. Requires workplace-based project for which the student evaluates and prepares a written proposal as a solution to specific work-related issues. Student, instructor, and employment supervisor jointly develop learning outcomes. Instructor and employment supervisor jointly evaluate student. (May be repeated for a maximum of 3 credits.) 1-3cr., 75hrs./cr.

298 Hospitality Capstone
Prereq: Consent.
Integrates all the course work required for the HOST degree program. Explores a work-related management issue or operational problem in the hospitality industry. Analyzes, researches, and develops an in-depth strategy to resolve the issue or problem. 3cr., 3hr. lect./disc./simulation

Human Services (HSER)

L. Stein

101 Health Navigator
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Recommended prep: Basic Internet Skills Prepares people to navigate the health and social services systems; provides knowledge foundation and practical skills base. Prepares the navigator to assist patients in various systems in search of appropriate diagnosis, treatment, and resolution. 3cr., 3hr. lect. (Crosslisted as HLTH 101).

110 Introduction to Human Services
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Introduces the nature of human service programs. Studies federal, state, and local human service responsibilities. Includes talks by agency representatives and field trips to agencies. 3cr., 3hr. lect. (CO)

111 Community Action
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Develops a concept of human needs and examines how social institutions and communities provide for such needs. Views selected social problems in community settings and how communities, agencies, and organizational structures function to deal with them. Introduces social-cultural considerations and community action strategies. Participants will identify a community problem/need and develop and implement a proposal for action. 3cr., 3hr. lect. (CO)

130 Introduction to Youth Practitioner
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Introduces the core skills needed by youth practitioners. Focuses on basic communication skills, growth and development of adolescents, family and cultures and their roles in development, and youth with special needs. Develops teamwork and basic workforce skills. 3cr., 3hr. lect.

140 Introduction to Techniques of Counseling & Interviewing
Prereq: HSER 110 and at least ENG 22; or consent.
Offers basic introduction to counseling processes to those working or planning to work in the helping professions including Early Childhood Education. Discusses theories and practices of counseling and interviewing individuals and groups. Gives students opportunities to practice skills through role-playing. Not intended to be preparation for counseling professionals. 3cr., 3hr. lect. (IN)

193v Work Practicum & Discussion in Community Service
Prereq: Permission of instructor; and HSER 110, HSER 140/248, and ENG 100.
Supervised work experience. Provides individualized in-service training in community services. Includes weekly seminar giving students opportunity to discuss practicum experiences. (May be repeated for a maximum of 12 credits. Responsibilities increase with each repeat.) 2-4cr., 1hr. disc./2.5-15hr. practicum

245 Group Counseling
Prereq: HSER 140, and ENG 22 with grade C or better or placement in ENG 100; or consent.
Provides theoretical and experiential training in facilitating self-exploration and growth groups. Designed to provide understanding and experience in selecting group members, establishing group norms and goals, setting group climates, developing group activities, promoting group and individual growth, and making appropriate group interventions. 3cr., 3hr. lect. (CO)

248 Case Management
Prereq: HSER 140, or consent.
Provides knowledge and practical skills to become competent case managers in human services agencies. Develops professional skills in order to teach those who need assistance to manage their own lives within the scope of their resources and abilities. Presents culturally sensitive strategies and strength-based model of case management. 3cr., 3hr. lect.

256 Dynamics of Family Violence
Prereq: ENG 100, or consent. Recommended: HSER 110.
Provides an in-depth study of the problems, dynamics, and effects of family violence and examines current societal responses. Includes the history of domestic violence, contributing cultural conditioning, and socialization factors. Reviews partner, child, and elder abuse within the family and multi-generational effects. Examines legal issues, prevalence and outcome data, contemporary theory, and best-practices for intervention nationally and in our community. 3cr., 3hr. lect.
268 Alcohol & Drug Education
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Provides a comprehensive review of drug actions on the body and the effects of drug use in our society. Provides an understanding of chemical dependency, its assessment and various treatment modalities. 3cr., 3hr. lect. (CO)

270 Substance Abuse Counseling
Prereq: HSER 140, and ENG 22 with grade C or better or placement at ENG 100, or consent.
Provides theoretical and experiential training in the prevention, intervention, and treatment applicable to a heterogeneous substance abuse population. Identifies ethical and legal issues of working with this population. 3cr., 3hr. lect. (CO)

293v Work Practicum & Discussion in Community Service
Prereq: Permission of instructor; and HSER 110, HSER 140/248, and ENG 100. If taking course for Substance Abuse Counseling Certificate: HSER 268 and HSER 270.
Provides advanced, individualized, in-service training in community-based human services agencies. Includes weekly seminar giving students the opportunity to discuss practicum experiences. (May be repeated for a maximum of 8 credits.) 2-4cr., 1hr. lect./practicum hours vary.

Humanities (HUM)
C. Gardner
100 Themes in Humanities
Gives the student a start toward viewing the arts as an expression of the meaning of life. Interweaves interpretations of history and a variety of works of poetry, drama, novel, painting, sculpture, music, and philosophy to illustrate mankind’s changing awareness. 3cr., 3hr. lect. (IN, CO)

400 Changes & Choices
Prereq: ENG 316, or consent.
Explores ways in which the humanities can contribute to personal and work lives, especially as individuals face change and make decisions. Analyzes how individuals world-wide examine circumstances including the changing landscape of living among people of various beliefs and cultures, making decisions, and dealing with consequences of such decisions. Examines the onset of other choices presented to us as a result of the original decisions made, or alternatively, made for us by our choosing not to engage in the process. 3cr., 3hr. lect.

Industrial Education, Building & Construction (IEDB)
C. Atay
20 Introduction to Building & Construction
Prereq: Placement at least ENG 21 and computer literacy, or consent.
Introduces students to construction and construction careers using the Contextual Model. Focuses on problem solving related to construction projects from origination of the idea through the actual completion of the construction process. Requires sequencing the project; identifying, by career, the people involved with the project; and identifying the permits, licences, and jurisdictional organizations. Introduces safety, common materials, hand and limited power tool applications, construction techniques, and blueprint reading. 3cr., 6hr. lect./lab

Information and Computer Science (ICS)
M. Christensen, D. Kruse
101 Digital Tools for the Information World
Emphasizes production of professional level documents, spreadsheets, presentations, databases, and web pages for problem solving. Includes concepts, terminology, and a contemporary operating system. Meets requirements for UH Manoa and UH Hilo College of Business and UH Manoa Biology program and Botany Department. 3cr., 3hr. lect./lab (FI)

102 Internet Resources
Prereq: ICS 101 or BUSN 150, or consent.
Recommended: Familiarity with the Internet.
Introduces the variety of resources available on the Internet. Examines history, current issues, and how the Internet works. Teaches terminology, file formats, and addressing. Introduces the concept of client-server programs as applied to the Internet. Explores use of the World Wide Web as a vehicle for research. Teaches how to find, evaluate, and publish information. 3cr., 3hr. lect./lab

110 Intro to Computer Programming
Prereq: ICS 101 with grade C or better, or consent.
Teaches fundamental programming concepts including sequential, selection, and repetition flow; variables and types; syntax; error types; compilation; linking; loading; and debugging. Introduces algorithms, flow charts, UML, and other analytic tools. Explains and practices problem solving and critical thinking methods. 3cr., 3hr. lect./lab

111 Introduction to Computer Science I
Prereq: ICS 110 with grade C or better, and MATH 25 with grade C or better or placement at least MATH 103 or 107, and ENG 19 with grade C or better or placement at least ENG 22, or consent.
Introduces problem solving using computers. Provides a background for students entering computer science, engineering, or other fields that require a background in computer programming. Teaches the basics of the computer hardware/software interfaces. Includes programs, applications, and compliers. Introduces programming concepts, algorithms, and problem solving techniques using high-level object-oriented programming languages. Meets ACM CS 1 course standards. 4cr., 4hr. lect./lab

115 Microcomputer Applications
Prereq: ICS 101 or BUSN 150, or consent.
Recommended: MATH 25 and elementary word processing or typewriting skills.
Examines the utilization of major application packages as tools in business problem solving. Covers the following applications: a micro-computer operating system, word processing, spreadsheets, graphics, and database management systems. 3cr., 3hr. lect./lab
116 Designing for Cross-Media: Publishing for Print & Web
Prereq: ICS 101 or BUSN 150, or consent.
Focuses on design and layout for cross-media publishing. Examines the interface, functions, and integration of publishing software for graphic design and production. Explains how to prepare content for publication for print, Portable Document Format (PDF), and on the web. 3cr., 3hr. lect./lab

150 Introduction to GIS/GPS
Prereq: ICS 101 or BUSN 150 either with grade C or better; or consent. Recommended: Familiarity with computer databases.
Introduces applications of geographic information systems (GIS) with a special emphasis on using ArcView GIS. Includes database construction and techniques for spatial data manipulation, analysis, and display. Teaches use of global positioning system (GPS.) Explores cross-disciplinary applications in the natural and social sciences. (Cross-listed as GIS 150) 4cr., 6hr. lect./lab

151C Introduction to C Programming
Prereq: ICS 101 with grade C or better, or consent.
Introduces students to C Programming Language and an Integrated Development Environment (IDE). Develops structured programs using problem solving, algorithm development, and programming concepts using a procedural language. 3cr., 3hr. lect./lab

161 Introduction to Computer Graphics
Prereq or coreq: ICS 101 or BUSN 150, or consent.
Introduces computer graphics tools and concepts in digital image editing, illustration graphics, print and web design, and 2D and 3D animation. (Cross-listed as ART 161) 3cr., 3hr. lect. (HE)

193v Computer Science Internship I
Prereq: ICS 111, and consent of both instructor and Co-op coordinator. Coreq: Enrollment in ECET program and one or more ECET or ETRO courses. Recommended: ETRO 101 and 105, and ENG 100.
Reflects student interest area and the availability of job stations. Offers opportunity to upgrade workplace employability. Student, instructor, and employment supervisor jointly develop learning outcomes. Instructor and employment supervisor jointly evaluate student. (May be repeated for a maximum of 3 credits.) 1-3cr., 75hrs. supervised work/cr.

205 Photoshop and Illustrator
Prereq: ICS 101 or BUSN 150, or consent.
Introduces the basic tools and features of digital image editing, photo retouching, and color correction of images. Focuses on the fundamental drawing techniques of illustration graphics including pen tool paths, objects, and type. (Cross-listed as ART 205.) 3 cr., 3hr. lect./lab

211 Introduction to Computer Science II
Prereq: ICS 111 with grade C or better, or consent. Recommended: MATH 135 or 155.
Reinforces and strengthens problem-solving skills using more advanced features of programming languages and algorithms, such as recursion, pointers, and memory management. Emphasizes use of data structures, such as arrays, lists, stacks, and queues. Meets ACM CS2 course standards. 3cr., 3hr. lect./lab

214 Fundamentals of Design for Print & Web
Prereq: ICS 101 or BUSN 150, or consent.
Introduces development principles related to graphic design terminology, tools and media, and layout and design concepts. Topics include integration of type, images, and other design elements, developing computer skills in industry standard computer programs, and study of design development pertaining to color theories, publications, and advertising. Projects will emphasize relating form to content through selection, creation and integration of typographic, digital imaging, illustrative, and design elements in print and web environments. (Cross-listed as ART 221.) 3cr., 3hr. lect./lab

215 Introduction to Unix/Linux
Prereq: ICS 101 with grade C or better, or consent.
Introduces the Unix/Linux operating system with emphasis on the Red Hat Linux release. Covers the history and structure of Unix/Linux, basic functions, and fundamental topics unique to Unix/Linux system administration. Stresses the ethics and responsibilities incumbent with Super User privileges. 4cr., 4hr. lect./lab

252 Unix/Linux System Administration
Prereq: ICS 251 with grade C or better, or consent.
Continues exploration of the Unix/Linux operating system with an examination of the tasks and responsibilities of system administration. Examines and explores the Unix group and user hierarchy, system security, networking fundamentals, network administration, system logs, troubleshooting, application installation, and system installation and maintenance. Emphasizes the ethics and responsibilities of Unix System Administration and root user privileges. 4 cr., 4hr. lect./lab

258 Programming for High Performance Clusters
Prereq: ICS 111 with grade C or better, or consent.
Explores programming for high performance computational clusters. Examines the algorithmic paradigms required to most efficiently and effectively create or modify code that will exploit the unique characteristics of parallel processing. Identifies the attributes common to highly parallelizable code. Develops parallel algorithms and writes implementing computer code. Tests, evaluates, and refines code to maximize performance and efficiency. 3cr., 3hr. lect./lab

261 Intermediate Computer Graphics
Prereq: ICS 161, 205, or 214; or consent.
Provides instruction with the tools and concepts of computer graphics utilizing digital media technology. Offers experience that integrates digital image editing, illustration graphics, print publishing, web authoring, 2D, and 3D animation. (Cross-listed as ART 218.) 3cr., 3hr. lect./lab (HE)

272 Digital Imaging & Animation
Prereq: ICS 261, or consent.
Develops 2D computer graphics as elements for 3D projects. Compiles digital imaging and illustration using natural media tools, filters, compositing, tem-
plates for 3D project scenes, texture-mapping, and source files. Outlines 3D modeling and animation concepts, tools, and techniques for project development. 3cr., 3hr. lect./lab

275 Introduction to High Performance Computing Clusters
Prereq: ICS 251 with grade C or better, or consent. Coreq: ICS 252.
Introduces High Performance Computing (HPC) clusters. Covers the history, technology, and structure of computational clusters, with emphasis on Beowulf-style clusters. Includes design concepts, software and hardware implementations, enabling applications, and administration. Includes algorithmic considerations and structures conducive to the development and implementation of parallelized applications. Provides experience building, configuring, and utilizing the cluster. 4cr., 4hr. lect./lab

283 Advanced Computer Graphics Design
Prereq: ICS 261, or consent.
Reviews the history, development, technology, and creative approaches of digital tools. Summarizes design theory. Employs graphics software to achieve concepts, content, and distinctive project solutions. Originates and manages the preproduction, production, postproduction of projects in print, web, digital imaging, illustration, and animation. Assembles projects into traditional, content, and digital portfolio, exhibiting, personal web site, employment, and professional organization. 3cr., 3hr. lect./lab

285 Digital Media Capstone
Prereq: ICS 283 and approval of DM faculty.
Provides an opportunity to integrate and employ tools and knowledge developed during the Digital Media program. Evaluates design and technical skills in digital media publishing projects. Assesses internship experiences and job market research for employment strategies. A comprehensive professional digital media publishing portfolio is required as a capstone project. 3cr., 3hr. lect./lab

293v Computer Science Internship II
Prereq: ICS 193v, or consent.
Reflects student interest area and the availability of job stations. Offers the opportunity to upgrade employment and problem-solving skills. Student, instructor, and employment supervisor develop learning outcomes. Instructor and the employment supervisor jointly evaluate student. (May be repeated for a maximum of 6 credits.) 1-3cr., 75hrs./cr.

298 Special Projects in Computer Science
Prereq: ICS 252 and ICS 275 both with grade C or better; or consent. Coreq: Determined by topic. Recommended: Determined by topic. Covers current topics in computer science. Introduces students to topics of current interest and relevant to their studies. Includes both theoretical and hands-on experience in cutting edge hardware, software, networking, operating systems, applications, and techniques. 4cr., 4hr. disc.

320 Introduction to Information Systems & E-Commerce
Prereq: ICS 115 or BUSN 151; and ICS 214; or consent.
Introduces general concepts of information systems and e-commerce. Includes key business applications, e-commerce and the Internet, system development, outsourcing, networking and data communications, data and databases, and security. Includes relevant projects. 3cr., 3hr. lect.

340 Introduction to Visual Basic
Prereq: ICS 115 or BUSN 151 either with grade C or better; or consent.
Introduces computer programming for non-computer science majors using the Visual Basic language. Includes algorithmic and problem-solving, fundamental programming constructs, object-oriented design, event-driven programming, Graphical User Interface (GUI) principles, and components. 3cr., 3hr. lect./lab

360 Database Application Design
Prereq: ICS 115 or BUSN 151, and ICS 214; or consent.
Introduces database management systems (DBMS). Covers both theoretical and practical aspects of DBMS, such as database design, use, and implementation. Includes a final programming project to design and develop a practical database system for library access, electronic commerce, information retrieval, or a similar application. Involves the use of the database language SQL and, possibly, other languages. 3cr., 3hr. lect.

385 Electronic Commerce
Prereq: ICS 320 and 360; or consent.
Surveys electronic commerce and business strategies, with an emphasis on technology and application development. 3cr., 3hr. lect.
420  E-Commerce Development  
Prereq: ICS 340 and 385; or consent. (Crosslisted as ICS 330) 
Provides advanced knowledge and skills for the design, construction, and implementation of an Internet based commerce site. Discusses legal, security, cultural, and policy issues. 3cr., 3hr. lect.

463  Human Computer Interaction  
Prereq: ICS 320 and MATH 115; or consent. (Crosslisted as ICS 392) 
Application of concepts and methodologies of human factors, psychology and software engineering to address ergonomic, cognitive, and social factors in the design and evaluation of human-computer systems. 3cr., 3hr. lect./disc.

**Interdisciplinary Studies (IS)**

M. Katsutani, N. Napoleon

104B Transitions: Personal  
Introduces students to college level work, strategic reasoning, communicating, and academic strategies. Helps students to develop an understanding of personal learning strengths, needs, time and resource management, and the use of relevant resources. Develops skills necessary to monitor progress and resolve problems. Introduces the creation of an individual learning portfolio and plan to support the successful transition to college. 1cr., 1hr. lect.

104C Transitions: Community  
Focuses on developing the understanding that it is essential for human beings to work together. Teaches how to work as a productive member of a successful team. Develops critical thinking and problem solving skills. Teaches and practices taking responsibility in implementing a solution, and recognizing and producing quality performance and quality products. 1cr., 1hr. lect.

104D Transitions: Lifelong  
Teaches students to become lifelong learners who are able to access and assess information, make judgments, and generate original ideas; apply collaborative skills to pursue individual and/or group goals; accept responsibility for their own behaviors and attitudes; and direct themselves as they strive for personal excellence. 1cr., 1hr. lect.

105  Career/Life Exploration & Planning  
Prereq: IS 105B, or consent. (Crosslisted as IS 205) 
Prepares student for effective career/life exploration, planning and decisions. Emphasizes self-assessment, world of work information, survey of occupational clusters and related academic preparation relevant to self-assessed interests, and values and decision-making. Students cannot take both IS 105 and IS 105B for credit toward a degree. 3cr., 3hr. lect./disc. (IN)

105B Personal Assessment  
Assists students in evaluating their interests, values, abilities, lifestyles, and other factors relating to career choice. Provides students with an opportunity to develop career decision-making skills. 1cr., 15hr. lect. per semester

105C Professional Employment Preparation  
Facilitates employment search by emphasizing professional techniques and standards in the preparation of application forms, resumes, cover letters, and employment interviews. (Crosslisted as BUSN 166.) 1cr., 1hr. lect.

105D Working in an Organization  
Career Exploration & Planning  
Examines case study approach to operating effectively in a government or company bureaucracy. Emphasizes topics such as “red tape,” cliques, impersonality, and frustrations. 1cr., 1hr. lect.

106  College Orientation I  
Develops knowledge, skills, and attitudes associated with personal, academic, and career success. Provides overviews of college policies, procedures, and curricular offerings. Develops communication and teamwork skills. Encourages contacts with students and staff. Strongly recommended for entering students. 2cr., 2hr. lect.

107  College Orientation II  
Prereq or coreq: IS 106, or consent. (Crosslisted as IS 107) 
Integrates, practices, and applies knowledge, skills, and attitudes associated with personal, academic, and career success. Integrates and applies communication and teamwork skills. Encourages contacts with students and staff as well as community and campus service. 1cr., 1hr. lect.

150  Leadership Skill Development  
Prereq: Consent. Recommended: IS 105B, or consent. 
Develops a clear understanding of self and personal strengths. Applies this knowledge and understanding in developing leadership skills. Teaches effective team building, coaching, and mentoring; effective communication; and project management skills. 3cr., 3hr. lect.

**Issues and Topics**

90v, 190v, 290v, 390v, 490v. See Special Curricula section on page 52. Note: For 190v courses in the Humanities, up to three credits of different topics may be used as general electives in the AA, AS, and AAS degrees; up to three additional credits may be used to satisfy a Humanities requirement for a total of no more than six Topics credits.

**Japanese (JPNS)**

H. DeLeon

101 Elementary Japanese I  
Introduces speaking, listening, reading, and writing skills of beginning Japanese. Includes basic sentence structures. Daily lab practice highly recommended. 4cr., 5hr. lect. (AP)

102 Elementary Japanese II  
Prereq: JPNS 101, or consent. 
Continues 101. Introduces additional basic Japanese speaking, listening, reading, and writing sentence structures. Daily lab practice highly recommended. 4cr., 5hr. lect. (AP)

201 Intermediate Japanese I  
Prereq: JPNS 102, or consent.  
Second level course in Japanese listening, reading, speaking, and writing. Introduces more advanced grammatical patterns and vocabulary words. Daily lab practice highly recommended. 4cr., 5hr. lect. (AP)

202 Intermediate Japanese II  
Prereq: JPNS 201, or consent.  
Continues JPNS 201. Completes introduction of major grammatical patterns of standard Japanese. Daily lab practice highly recommended. 4cr., 5hr. lect. (AP)
**Journalism (JOUR)**

**205  News Writing**
*Prereq: Basic keyboarding skills of 15 wpm and ENG 100, or consent.*
Introduces the fundamentals of news style, reporting and ethics. Provides practical experience in news gathering and writing. 3 cr., 3 hr. lect.

**Learning Skills (LSK)**

**30  Study Skills**
*Prereq: ENG 15, or placement at least ENG 19, or consent.*
Examines effective learning of skills for success in vocational as well as general education classes. Focuses on organization (time management, note-taking, and test-taking) and on communication (reading, writing, listening, and speaking). Includes use of library and learning lab for individual improvement. 3 cr., 3 hr. lect./lab

**300  College Learning Skills**
*Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.*
Enhances students’ abilities to succeed academically. Investigates communication and organizational skills, methods of inquiry, creative thinking skills, cognitive learning styles, and academic and community resources. 3 cr., 3 hr. lect./lab

**Linguistics (LING)**

**102  Introduction to the Study of Language**
*Prereq: ENG 100 or 102, or placement at ENG 100, or consent.*
Investigates the nature and workings of language: its composition (sound system, grammatical structure, and lexicon), representation (oral and written), and divergence (relationships between languages of the world). General linguistic principles applicable to all languages will be covered. 3 cr., 3 hr. lect. (CO)

**Maintenance (MAIN)**

**20  Introduction to Building Maintenance**
*C. Atay*
Explores details of building construction and maintenance. Introduces fundamentals of building systems and operations of the maintenance department. 2 cr., 3 hr. lect./lab

**30  Masonry**
Introduces materials and explains techniques used in installing and repairing concrete, hollow tile, and related masonry construction. 2 cr., 3 hr. lect./lab

**40  Painting and Decorating**
Introduces materials and explains techniques used in applying and maintaining paints, wallpaper, and plaster. 2 cr., 3 hr. lect./lab

**50  Plumbing I**
Introduces materials and explains techniques used to install and maintain plumbing lines, fixtures, and controls. Emphasizes effective maintenance procedures for commercial structures. 2 cr., 3 hr. lect./lab

**55  Plumbing II**
*Prereq: MAIN 50, or consent.*
Studies the plumbing system of the typical single-family residential dwelling. Examines how local and national codes apply to residential units. 2 cr., 3 hr. lect./lab

**60  Small Equipment Repair**
Introduces the repair and maintenance of small engines, appliances, garden equipment, and power tools. Examines troubleshooting techniques and emphasizes repair fundamentals. 2 cr., 3 hr. lect./lab

**65  Air Conditioning and Refrigeration**
Studies air conditioning systems of residential and commercial buildings. Explores various types of refrigeration systems popular today. Introduces concepts of planning, testing, troubleshooting, and balancing such systems. 2 cr., 3 hr. lect./lab

**Management (MGT)**

**118  Introduction to Supervision**
*Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.*
Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Emphasizes basics of effective supervision. Introduces responsibilities of a supervisor, along with modern supervisory and human relations techniques and concepts. Provides practical applications in day-to-day supervisor-employee relationships. 3 cr., 3 hr. lect.

**121  Organizational Behavior**
*Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.*
Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Investigates human behavior in organizations at the individual and group level including the effect of organization. Stresses improving interpersonal relations. Studies diversity, communication, perception, leadership, motivation, group interaction, overcoming resistance to change, power, politics, and organizational culture and structure. Emphasizes interactive and experiential methods of learning. 3 cr., 3 hr. lect.

**124  Human Resources Management**
*Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.*
Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Studies human resource functions including: recruitment, interviewing, selection, testing, placement, orientation, training, rating, promotion, transfer, and separation and grievance handling. Stresses the need for good labor-management and human relations. 3 cr., 3 hr. lect.
160 Advertising & Promotion
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent.
Recommended: MKT 120.
Introduces the principles of advertising and promotion, including sales promotion, market- ing, publicity, public relations, and selling, and their relationship to the marketing system. Stresses strategies of informing, persuading, and integrating information to create a positive image. 3cr., 3hr. lect.

300 Principles of Marketing
Prereq: BUS 120, ECON 130, and ECON 131; or consent.
Applies the fundamental principles of successful marketing including segmentation, targeting, product development, positioning, packaging, placement, pricing, promotion, service and relationship and international organizations with an emphasis on decision-making. Includes communication, work motivation, group dynamics, leadership and organizational change, conflict, personality, and teamwork. Relates these concepts to performance, job satisfaction, and organizational commitment. 3cr., 3hr. lect.

120 Principles of Management
Prereq: BUS 120 and either PSY 100 or SOC 100, or consent.
Introduces activities and skills needed to successfully manage both domestic and international organizations with an emphasis on decision-making. Includes communication, work motivation, group dynamics, leadership and organizational change, conflict, personality, and teamwork. Relates these concepts to performance, job satisfaction, and organizational commitment. 3cr., 3hr. lect.

322 Organizational Leadership and Management of Change
Prereq: MGT 310 with a C or better, or consent. Recommended: PSY 100 or SOC 100.
Prepares managers to influence the human side of developing and implementing changes in organizations. Theory, cases, and exercises help managers to understand the socio-technical aspects of change; to see leadership as motivating organizational members; to understand their own ability to influence others; and to understand the leadership successes of noted leaders from all walks of life. 3cr., 3hr. lect.

310 Principles of Management
Prereq: BUS 120 and either PSY 100 or SOC 100, or consent.
Introduces activities and skills needed to successfully manage both domestic and international organizations with an emphasis on decision-making. Includes communication, work motivation, group dynamics, leadership and organizational change, conflict, personality, and teamwork. Relates these concepts to performance, job satisfaction, and organizational commitment. 3cr., 3hr. lect.

400 New Venture Marketing
Prereq: MKT 300, or consent.
Examines how startup and small/medium companies reach the marketplace and sustain their businesses within highly competitive industries. Recognizes the need of management to operate flexibly, making maximum effective use of scarce resources in terms of people, equipment, funds, and the opportunities that exist within new and established market niches. 3cr., 3hr. lect.

400 Managing the Growing Business
Prereq: MGT 310, or consent.
Addresses the dynamics of growth. Includes leadership and management challenges associated with stages of organizational growth, organization design requirements, and the ever-present change process. 3cr., 3hr. lect.

Marketing (MKT)
R. Boritzer, R. Miller

120 Principles of Marketing
Prereq: ENG 19 with grade C or better, or placement at least ENG 22, or consent. Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100.
Introduces marketing principles including: channels of distribution, pricing, government regulations, consumer behavior, marketing functions and organization, product analysis, and promotional activity. 3cr., 3hr. lect.

Mathematics (MATH)
K. Acks, D. Harbin, K. Morris, A. Wolf

22 Pre-Algebra Mathematics
Prereq: MATH 1 or placement at MATH 22, and ENG 19 with grade C or better or placement at least ENG 22, or consent.
Recommended: At least 9th grade reading skills.
Prepares students who want to strengthen computational and problem-solving skills before proceeding to an algebra course. Reviews arithmetic and measurements (both metric and American). Teaches the concept of variables, operations involving signed numbers, simplifying algebraic expressions, solving equations and inequalities in one variable, solving simple formulas, ratio and proportion, and solving application problems using equations. 3cr., 3hr. lect./individualized study
MATH ROUTES FOR SPECIFIC MAJORS

Begin at the appropriate course, as determined by your math placement score and your particular career path.

**Business: CULN**

MATH 1 → MATH 50H

**Vocational: ABRP, AG, AMT, FT, SUSTAINABLE CONSTRUCTION TECH**

MATH 1 → MATH 50

See program map for specific requirement.

**Vocational: ECET**

MATH 1 → MATH 22 → MATH 23 → MATH 25 → MATH 107

**Business: ACC, BUS, BUSN, HOST**

MATH 1 → MATH 22 → BUSN 189

or MATH 1 → MATH 22 → MATH 23 → MATH 100/115

or MATH 1 → MATH 22 → MATH 23 → MATH 25 → MATH 103

→ MATH 135 → MATH 203

**Liberal Arts (non-calculus)**

Public Service: AJ, HSER, NURS

See Program Maps, pages 25-50

MATH 1 → MATH 22 → MATH 23

MATH 100

MATH 111 → 112

or MATH 115

**Liberal Arts (calculus)**

MATH 1 → MATH 22 → MATH 23 → MATH 25 → MATH 103 → MATH 135

→ MATH 140

→ MATH 203

→ MATH 205 → MATH 206 → MATH 231 → MATH 232
systems of equations in two variables, using the calculator to simplify radicals, using the quadratic formula to solve quadratic equations, and graphing quadratic equations. Uses mathematical skills to solve application problems. 3cr., 3hr. lect./individualized study

25 Elementary Algebra II
Prereq: MATH 23 with grade C or better or placement at MATH 25, and ENG 19 or higher with grade C or better; or consent. Recommended: At least 10th grade reading skills. Prepares student for sequence of math courses that leads to calculus. Teaches exponents, polynomials, factoring, rational expressions and equations, radical expressions and equations, and quadratic equations. Uses mathematical skills to solve application problems. 3cr., 3hr. lect./individualized study

50 Technical Mathematics
Prereq: MATH 1 or placement at least MATH 22, and ENG 19 with grade C or better or placement at least ENG 22; or consent. Recommended: At least 10th grade reading skills. Develops skills in basic arithmetic, measurement, addition and subtraction, multiplication and division of real numbers, evaluating formulas, solving equations and applications of these skills in practical situations related to technical careers. 3cr., 3hr. lect.

50H Technical Mathematics: Culinary Arts
Prereq: MATH 1 or placement at least MATH 22, and ENG 19 with grade C or better or placement at least ENG 22; or consent. Recommended: At least 10th grade reading skills. Applies and relates mathematical skills to the solution of food service problems: adjusting and costing recipes, calculating yields, markups, business forms and reports, financial statements, interest, taxes, and scheduling. 3cr., 4hr. lect./lab

50T Elementary Measurement
Prereq: MATH 1 or placement at least MATH 22, and ENG 19 with grade C or better or placement at least ENG 22; or consent. Recommended: At least 10th grade reading skills. Explains computing and applying measurements of length, area, and volume. 2cr., 2hr. lect.

50U Angular Measurement
Prereq: MATH 1 or placement at least MATH 22, and ENG 19 with grade C or better or placement at least ENG 22; or consent. Recommended: At least 10th grade reading skills. Explains calculating angles and sides of triangles using right angle trigonometry. 1cr., 1hr. lect.

50X Ratio and Proportion
Prereq: MATH 1 or placement at least MATH 22, and ENG 19 with grade C or better or placement at least ENG 22; or consent. Recommended: At least 10th grade reading skills. Treats ratios and solving for unknowns with proportions. 1cr., 1hr. lect.

50Y Metric Measurement
Prereq: MATH 1 or placement at least MATH 22, and ENG 19 with grade C or better or placement at least ENG 22; or consent. Recommended: At least 10th grade reading skills. Explains measuring length, area, volume, capacity, and weight using the metric system. 1cr., 1hr. lect.

100 Survey of Mathematics
Prereq: MATH 23 or 25 with grade C or better or placement at least MATH 103, and ENG 100 with grade C or better or concurrent; or consent. Recommended: At least 11th grade reading skills. Acquaints the non-specialist with examples of mathematical reasoning. Explores selected topics such as numeration systems, consumer math, linear and exponential growth, inductive patterns, mathematical art, probability, statistics, set theory, and logic. 3cr., 3hr. lect. (FS, FN)

103 College Algebra
Prereq: MATH 23 with grade C or better or placement at least MATH 103, and ENG 22 with grade C or better or placement at ENG 100; or consent. Analyzes and interprets the behavior and nature of functions including linear, polynomial, exponential, log, absolute value, and piecewise-defined functions; solves systems of equations; models and solves real world applications. 3cr., 3hr. lect. (FS, FN)

107 Math for Electronics & Computers
Prereq: MATH 25 with grade C or better or placement at least MATH 103, and ENG 22 with grade C or better or placement at ENG 100; or consent. Surveys technical mathematics, with emphasis on applications to electronics, computers, and networking. Includes numbering systems for computers, Boolean algebra and logic gates for digital circuits, trigonometry for AC circuits, exponential and logarithmic functions for AC circuits, and rectangular and polar forms of complex numbers for LRC circuits. 4cr., 4hr. lect.

111 Mathematics for Elementary Teachers I
Prereq: MATH 23 with grade C or better or placement at least MATH 100, and ENG 100 with grade C or better (or concurrent); or consent. Explores mathematical ideas, problem solving, quantitative and symbolic reasoning. Focuses on operations and their properties, sets, counting, patterns, and algebra. 3cr., 3hr. lect. (FS, FN)

112 Mathematics for Elementary Teachers II
Prereq: MATH 111 with grade C or better. Recommended: At least 11th grade reading skills. Demonstrates operations and develops the properties of the natural numbers, integers, rational numbers, and real numbers. Explores the use of mathematical operations to solve problems including geometry, probability, and physical rates. 3cr., 3hr. lect. (FS, FN)

115 Statistics
Prereq: MATH 23 with grade C or better or placement at least MATH 100 or 103, and ENG 100 with grade C or better (or concurrent); or consent. Recommended: At least 11th grade reading skills. Presents basic statistical topics including measures of central tendency and dispersion, classification of variables, sampling techniques, elementary probability, normal and binomial probability distributions, tests of hypothesis, and linear regression and correlation. 3cr., 3hr. lect. (FS, FN)
135 Pre-Calculus: Elementary Functions
Prereq: MATH 103 with grade C or better or placement at MATH 135, and ENG 100 with grade C or better (or concurrent); or consent. Recommended: At least 11th grade reading skills. Investigates the nature of functions and examines polynomial, rational, exponential, and logarithmic functions. Studies the solution to equations and inequalities in one and several variables.
3cr., 3hr. lect. (FS, FN)

140 Trigonometry Analytic Geometry
Prereq: MATH 135 with grade C or better or placement at MATH 140, and ENG 100 with grade C or better (or concurrent); or consent. Recommended: At least 11th grade reading skills. Studies the trigonometric functions, their applications, identities and equations, the conic sections, and some topics of discrete algebra. 3cr., 3hr. lect. (FS, FN)

203 Calculus for Business & Social Sciences
Prereq: MATH 135 with grade C or better or placement at MATH 140, and ENG 100 with grade C or better (or concurrent); or consent. Recommended: At least 12th grade reading skills. Studies the basic concepts of differentiation and integration and their applications in the areas of finance, management, economics, and social sciences.
3cr., 3hr. lect. (FS, FN)

205 Calculus I
Prereq: MATH 140 with grade C or better or placement at MATH 205, and ENG 100 with grade C or better (or concurrent); or consent. Recommended: At least 12th grade reading skills. Explores basic concepts of differential and integral calculus. Reviews functions, focuses on differentiation and its applications. Introduces integration.
4cr., 4hr. lect. (FS, FN)

206 Calculus II
Prereq: MATH 205 with grade C or better or placement at MATH 206, and ENG 100 with grade C or better (or concurrent); or consent. Recommended: At least 12th grade reading skills. Extends and completes the calculus on a single real variable with the differentiation and integration of the transcendental functions, techniques of integration, applications, and infinite series.
4cr., 4hr. lect. (FS, FN)

231 Calculus III
Prereq: MATH 206 with grade C or better, and ENG 100 with grade C or better (or concurrent); or consent. Recommended: At least 12th grade reading skills. Studies functions of several variables including vectors, vector functions, the calculus on these functions, and 3-dimensional analytic geometry.
3cr., 3hr. lect./disc. (FS, FN)

232 Calculus IV
Prereq: MATH 231 with grade C or better, and ENG 100 with grade C or better (or concurrent); or consent. Recommended: At least 12th grade reading skills. Completes the study of functions of several variables with multiple integrals and vector analysis. Studies the solutions of elementary differential equations.
3cr., 3hr. lect./disc. (FS, FN)

Microbiology (MICR)

S. Calder, S. Irwin

130 General Microbiology
Prereq: ENG 100 with grade C or better, and MATH 23 with grade C or better (or concurrent) or placement at least MATH 25; or consent. Introduces fundamentals of microbiology. Explains roles of microorganisms and how they affect humans. Emphasizes medical and public health aspects, bacterial and viral diseases, and epidemiology.
3cr., 3hr. lect.

140 General Microbiology Laboratory
Prereq or coreq: MICR 130. Laboratory to accompany Microbiology 130. 2cr., 4hr. lab.

Music (MUS)

R. Wehrman

106 Introduction to Music Literature
Treats styles and forms of Western music. Develops skills in listening to and appreciating music. Introduces music styles in their historical and social contexts.
3cr., 3hr. lect. (CO)

107 Music in World Cultures
Analyzes folk, popular, and art music from major regions of the world, with emphasis on Asia and the Pacific. Develops a knowledge of representative styles and regional characteristics in world music.
3cr., 3hr. lect. (CO, FG)

108 Fundamentals of Western Music
Recommended coreq: MUS 121C. Introduces basic musical concepts to enable students to express themselves as budding composers, performers, listeners and teachers. Develops skills in listening to and writing down examples, clapping out rhythms, melodies and chords. Designed for the beginner with no previous musical training.
3cr., 3hr. lect. (HE)

114 College Chorus
Recommended coreq: MUS 123 or 124. No previous choral experience required. Introduces performance of choral literature from the Renaissance to the present. Includes fundamentals of music and voice training. (May be repeated without limit for credit.) 2cr., 3hr. lect./lab (HE)

114H Hawaiian Chorus
Recommended: Previous vocal experience may be helpful. Introduces basic vocal group performance. Studies ancient to modern Hawaiian songs.
2cr., 3hr. lect./lab (HE, HI)

121C Elementary Class Piano I
Prereq: Must have access to a piano or keyboard. Designed for beginning pianists or for musicians who play another instrument. Develops understanding of concepts of melody, rhythm, harmony and form using simple songs. Develops basic keyboard technique by covering fingerings, hand position, hand coordination, simple reading and chord exercises. (Cannot be audited.) 2cr., 3hr. lect./lab (HE)

121D Elementary Guitar Class I
Prereq: Requires a guitar in playable condition. Introduces classroom instruction in guitar playing. Develops basic guitar technique by covering hand positions, fingering, scales, chords, and arpeggios. Teaches music reading. Applies reading skills to performance. Introduces a variety of guitar literature.
2cr., 2hr. lect./lab (HE)
Music

126C Elementary Class Piano II
Prereq: MUS 121C with grade C or better, or consent.
Develops basic keyboard skills established during the first semester, including both reading and playing by ear.
Repertoire expands to a variety of styles, including classical, pop, jazz, and rock.
(Cannot be audited.) 2cr., 3hr. lect. (HE)

122D Elementary Guitar Class II
Prereq: MUS 121D, or consent.
Requires a guitar in playable condition.
Investigates further guitar techniques, ensemble and solo playing. Introduces sight reading. Develops skill in interpretation. 2cr., 2hr. lect./lab (HE)

123 Beginning Voice Class
Recommended coreq: MUS 108 and MUS 114. Previous musical training is desirable but not necessary.
Introduces principles of voice production as related to problems of voice literature, both technical and interpretive, at an elementary level.
2cr., 2hr. lect./lab (HE)

124 Intermediate Voice Class
Prereq: MUS 123, or consent. Recommended coreq: MUS 108 and MUS 114. Previous musical training is desirable but not necessary.
Develops principles of voice production as related to problems of voice literature, both technical and interpretive, at an elementary level.
2cr., 2hr. lect./lab (HE)

167 Evolution of American Popular Music
Traces the history of American popular music, including soul, blues, rhythm and blues, country and western, Dixieland, gospel, folk, and rock.
3cr., 3hr. lect. (CO)

180 Basic Theory and Aural Skills
Recommended: MUS 108.
Teaches basic concepts of music theory, notation, and reading applied to dictation and sight-singing. Introduces reading and sight-singing to students with limited skills in music. Develops listening and writing skills necessary to compose music.
2cr., 1hr. lect./2hr. lect./lab (HE)

203 Instrumental Ensemble
Prereq: Consent by audition, or prior MUS 203 with grade C or better.
Rehearsal and performance group for instrumentalists. Repertoire ranges from the Renaissance and Baroque to contemporary music, including major works for chorus and opera.
(May be repeated without limit for credit.) 1cr., 2hr. lect./lab.

216 Intermediate Piano Class
Prereq: MUS 121C and 122C, or consent.
Further develops basic keyboard skills established during the first two semesters, including both reading and playing by ear. Expands repertoire to a variety of styles, including classical, pop, jazz, and rock.
Provides experience playing a solo in a recital.
2cr., 2hr. lect./lab (HE)

253 Basic Experiences of Music
Introduces components of music, specifically time, pitch, media, musical expression, and form. Demonstrates how these interact with each other to comprise a musical experience. Presents correlation between music and brain development in early childhood. Intended for Education majors.
3cr., 3hr. lect./1hr. lab (HE)

271 Introduction to Music Technology
Recommended: MUS 108, 121C, or 121D.
Develops an understanding of history and application of electronics in musical composition and performance. Facilitates the creative process in music through the application of technology.
3cr., 4hr. lect./lab (HE)

272 Digital Recording Techniques
Prereq: MUS 271, or consent.
Recommended: MUS 108 or 121C or 121D, or ICS 161, or TCOM 261.
Continues MUS 271. Focuses specifically on digital audio recording and processing techniques on the Pro Tools HD platform as they apply to the audio arts and sciences. Explores the roles of engineer and producer in the digital audio studio environment.
3cr., 4hr. lect./lab (HE)

Nursing (NURS)
Course descriptions for Hawai‘i Statewide Nursing Curriculum will appear in the 2010 - 2011 General Catalog when courses begin.

12 ARCH: Diseases, Special Diets, Medications
Recommended prereq or coreq: NURS 16. Prepares the adult residential care home operator to observe the resident for signs and symptoms of common diseases, make medications available, and prepare for special diets.
1cr., 1hr. lect.

13 ARCH: Helping Therapies & Behavior Management
Recommended prereq or coreq: NURS 16. Prepares the adult residential care home operator to assist in the provision of occupational, physical, recreational, and diversional therapy. Identifies the operator’s role in fostering mental health and care of the mentally ill and mentally retarded.
1cr., 1hr. lect.

14 ARCH: Regulations, Accounts, Community Resources
Recommended prereq or coreq: NURS 16. Prepares the adult residential care home operator to implement specified regulations of Chapter 100, prepare simple accounting records, and identify community resources available to resident operators.
1cr., 1hr. lect.

16 Nurse Aide Training
Prereq: ENG 19 or placement at least ENG 22, or consent.
Introduces nursing care for semi-acute or convalescent clients in the hospital, long-term care, or home setting. Prepares nurse aides to work under supervision of a registered or practical nurse. Demonstrates beginning level nursing for those interested in this health field.
6cr., 4hr. lect./6hr. lab demo and clinical experience.
50 Health Unit Coordinator
Prereq: BIOL 100 with grade C or better, or consent. Coreq: NURS 16.
Develops knowledge of medical terminology and medical abbreviations; diagnostic
tests and procedures; drug categories and medications commonly used in hospitals,
ambulatory and long term care facilities. Includes background information relating
to physician orders.
4cr., 2hr. lect./4hr. lab

153 Nursing Concepts & Skills
Prereq: Admission to Nursing program.
Coreq: NURS 153L.
Introduces the student to basic concepts and skills necessary for the nurse to
implement the nursing process to support client/family reaction to stressors.
Introduces knowledge and skills in the following areas: safety, asepsis, com-
unication in older adults; nutrition, fluids, and elimination; pharmacology;
peri-operative nursing; problems relating to regulatory mechanisms (exemplified
by diabetes mellitus). (Letter grade only.)
4cr., 4hr. lect.

153L Nursing Concepts & Skills Lab
Prereq: Admission to Nursing program.
Coreq: NURS 153.
Introduces use of the nursing process to the care of clients/families along the
wellness-illness continuum in the long-
term and acute care settings. Develops
beginning skills in primary, secondary, and
tertiary prevention and interven-
tions used to care for selected clients with
medical/surgical problems. Successful
completion of the Nursing Math Module is a re-
quirement of NURS 153L. (Letter grade only.)
5cr., 15hr. lab

155 Child Health Nursing I
Prereq: Admission to Nursing program.
Coreq: NURS 155L.
Introduces primary and secondary nurs-
ing prevention/interventions to promote
wellness and health maintenance in the
child. Discusses commonly recurring
childhood illnesses. Introduces concepts
of nursing assessment with application
to pediatric clients and families. (Letter
grade only.) 1cr., 1hr. lect.

155L Child Health Nursing I Lab
Prereq: Admission to Nursing program.
Coreq: NURS 155.
Applies the nursing process to the
primary, secondary, and tertiary preven-
tion/interventions for children in the
community with focus on wellness and
commonly recurring childhood illnesses.
Learning experience is provided through
campus learning exercises, visits to pedi-
trician offices, and early childhood pro-
grams. (Letter grade only.) 1cr., 3hr. lab

156 Adult Health Nursing I
Prereq: NURS 153 and NURS 153L both with grade C or better. Coreq: NURS 156L.
Focuses on use of the nursing process and therapeutic communication to assist
clients and families with problems of
ventilation; oxygenation, perfusion, me-
tabolism, digestion, and absorption; and
neurologic and mental health stressors.
(Letter grade only.) 2cr., 2hr. lect.

156L Adult Health Nursing I Lab
Prereq: NURS 153 and NURS 153L with
grade C or better. Coreq: NURS 156.
Applies the nursing process using
primary, secondary, and tertiary preven-
tion/interventions to assist groups of
clients and families in community-based
and acute care settings. Introduces skills
in management of intravenous therapy.
(Letter grade only.) 2cr., 6hr. lab

157 Adult Health Nursing II
Prereq: NURS 156 and NURS 156L with
grade C or better. Coreq: NURS 157L.
Focuses on use of the nursing process to
assist clients and families with problems
of movement and coordination, and with
urinary function. Introduces manage-
ment of fluid balance and intravenous
medications. (Letter grade only.)
2cr., 4hr. lect. for 8 wks.

157L Adult Health Nursing II Lab
Prereq: NURS 156 and NURS 156L with
grade C or better. Coreq: NURS 157.
Applies the nursing process using
primary, secondary, and tertiary preven-
tion/interventions to assist groups of
clients and families in community-based
and acute care settings. Introduces skills
in management of intravenous therapy.
(Letter grade only.) 2cr., 6hr. lab

158 Issues & Trends in Nursing I
Prereq: Admission to Nursing program.
Focuses on historical evolution of nurs-
ing and its impact on health and social
issues within a multicultural perspective.
Discusses legal, ethical, and professional
behavior, and Hawai’i State Board of
Nursing rules and regulations. Explores
health and economic trends and their
impact on the health care system. Intro-
duces the Neuman Systems Model and
philosophy of nursing. (Letter grade only.)
1cr., 1hr. lect.
240 Family Health Nursing
Prereq: NURS 153 and NURS 153L both with grade C or better. Coreq: NURS 240L.
Uses the nursing process for theory and care of the client and family during the childbearing period. Includes the nursing care of normal and high risk clients during pregnancy, labor, and delivery as well as newborn care. (Letter grade only.) 2cr., 2hr. lect.

240L Family Health Nursing Lab
Prereq: NURS 153 and NURS 153L both with grade C or better. Coreq: NURS 240L.
Applies the nursing process using primary, secondary, and tertiary prevention/interventions in the prenatal clinic and in the hospital setting. Includes care of clients in community-based and acute care settings. Develops skills in nursing care of normal and high risk clients and families during the antepartal, intrapartal, and postpartal periods, as well as care of the newborn infant. (Letter grade only.) 2cr., 6hr. lab

253 Mental Health - Psychiatric Nursing
Prereq: NURS 157 and NURS 157L both with grade B or better. Coreq: NURS 253L.
Focuses on use of the nursing process to assess clients and families with intrapersonal, interpersonal, and intrapersonal stressors. Develops ability to enhance coping strategies that increase lines of resistance to reduce or eliminate stressors for clients. Emphasizes assisting clients to retain, attain, or maintain system stability. (Letter grade only.) 2cr., 2hr. lect.

253L Mental Health - Psychiatric Nursing Lab
Prereq: NURS 157 and NURS 157L both with grade B or better. Coreq: NURS 253L.
Applies the nursing process using primary, secondary, and tertiary prevention/interventions that assist clients and families to retain, attain, or maintain system stability in community-based and acute care psychiatric and mental health settings. (Letter grade only.) 2cr., 6hr. lab

254 Family Health Nursing II
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 254L.
Uses the nursing process for theory and care of the client and family during the childbearing period. Focuses on the care of high risk clients during pregnancy, labor, and delivery as well as newborn care. (Letter grade only.) 1cr., 1hr. lect.

254L Family Health Nursing II Lab
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 254L.
Applies the nursing process using primary, secondary, and tertiary prevention/interventions in the hospital obstetrical units of labor, delivery, and postpartum. Develops skills in the care of client and family with complex problems during the antepartal, intrapartal, and postpartal periods, and nursing care of the newborn. (Letter grade only.) 1cr., 3hr. lab

255 Child Health Nursing II
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 255L.
Uses the nursing process to assist children and their families with complex health problems. (Letter grade only.) 1cr., 1hr. lect.

255L Child Health Nursing II Lab
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 255L.
Applies the nursing process to the primary, secondary, and tertiary prevention/interventions for children and their families with complex problems in the acute care setting. (Letter grade only.) 1cr., 3hr. lab

256 Adult Health Nursing III
Prereq: NURS 157 with grade B or better. Coreq: NURS 256L.
Focuses on use of the nursing process to assist clients and families with problems of oxygenation: perfusion; ventilation, diffusion, and transport; metabolism, digestion, and absorption; immune response; and the cancer experience. Emphasizes nursing theory related to physiological, psychological, socio-cultural, developmental, and spiritual variables as the client moves along the wellness-illness continuum. Includes care of clients in emergency settings. (Letter grade only.) 4cr., 12hr. lab

258 Issues & Trends In Nursing II
Prereq: NURS 158 with grade C or better.
Focuses on management and leadership theory and application; role(s) of the registered nurse; legal, ethical, social, political, and professional issues; contemporary trends in current and future health care needs; and the transition from student nurse to registered professional nurse. (Letter grade only.) 1cr., 1hr. lect.

256L Adult Health Nursing III Lab
Prereq: NURS 157 and NURS 157L both with grade B or better. Coreq: NURS 256.
Applies the nursing process using primary, secondary, and tertiary prevention/interventions to care for clients and families along the wellness-illness continuum in community-based and acute care settings. Develops skills in the care of clients and families with complex problems of oxygenation: perfusion; ventilation, diffusion, and transport; metabolism, digestion, and absorption; immune response; and the cancer experience. (Letter grade only.) 3cr., 9hr. lab

257 Adult Health Nursing IV
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 257L.
Focuses on use of the nursing process to assist clients and families with complex stressors: neurologic, reproductive, and regulatory problems. Emphasizes nursing theory related to physiological, psychological, socio-cultural, developmental, and spiritual variables as the client moves along the wellness-illness continuum. Includes care of the client and family in emergency settings. (Letter grade only.) 2cr., 2hr. lect.

257L Adult Health Nursing IV Lab
Prereq: NURS 256 and NURS 256L both with grade B or better. Coreq: NURS 257.
Applies primary, secondary, tertiary prevention/interventions with clients and families in community-based and acute care settings. Develops skill in the care of clients and families with complex neurologic, reproductive, and regulatory problems. Focuses on leadership-management-caregiving roles in a variety of settings. Includes care of clients in emergency setting. (Letter grade only.) 4cr., 12hr. lab

258 Issues & Trends In Nursing II
Prereq: NURS 158 with grade C or better.
Focuses on management and leadership theory and application; role(s) of the registered nurse; legal, ethical, social, political, and professional issues; contemporary trends in current and future health care needs; and the transition from student nurse to registered professional nurse. (Letter grade only.) 1cr., 1hr. lect.
259  **Basic Cardiac Arrhythmias**  
Prereq: NURS 256 (or concurrent), or licensed RN or LPN with consent.  
Develops advanced nursing theory related to origin, interpretation, and treatment of basic cardiac arrhythmias.  
Focuses on cardiac conduction system, basic cardiac dysrhythmias, and a systematic approach to accurate electrocardiogram interpretation and treatment of dysrhythmias.  
2cr., 2hr. lect.

261  **Advanced Electro-Cardiogram Interpretation**  
Prereq: NURS 259 (or concurrent), or licensed RN or LPN with consent.  
Develops advanced nursing theory related to interpretation of 12-lead EKG.  
Focuses on EKG changes that occur with myocardial infarction, axis deviation, artificial pacemaker, defibrillation, and cardioversion.  
1cr., 1hr. lect.

262  **Gerontological Nursing: A Tele-Health & Community-Based Perspective**  
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.  
Discusses and applies nursing theory and nursing process in care of geriatric clients in varied community based settings.  
Focuses on the concepts of primary, secondary, tertiary prevention, including tele-health and tele-nursing interventions.  
3cr., 3hr. focused disc.

262L  **Gerontological Nursing: A Tele-Health & Community-Based Perspective Lab**  
Prereq: NURS 262 (or concurrent), and ENG 22 or 55 with grade C or better or placement at ENG 100; or consent.  
Applies nursing process in care of geriatric clients in varied community based settings: long term care, home care, and ambulatory care.  
Tele-health and tele-nursing interventions applied to the care of the elderly in community settings is stressed.  
1cr., 3hr. lab

263  **Advanced Cardio-Pulmonary Theory**  
Prereq: NURS 257 (or concurrent), or licensed RN or LPN with consent.  
Develops advanced nursing theory related to the support of significant others and the care for clients with cardiopulmonary adaptations.  
Focuses on anatomy, physiology, and physical assessment of the cardiac and respiratory systems.  
Applies the nursing process to specific cardiac and respiratory disorders.  
3cr., 3hr. lect.

**Occupational Safety & Health (OSH)**

20  **Introduction to Occupational Safety & Health I**  
Familiarizes student with practical applications of the William-Steiger Occupational Safety and Health Act of 1970 USDL.  
1cr., 15hr. lect. per semester

**Oceanography (OCN)**

A. Coopersmith, J. Pye

64  **Hawaiian Marinelife Identification**  
Recommended: Enrollment in Marine Option Program.  
Teaches field identification of fishes, invertebrates, and marine algae.  
Studies ecology of coral reef species.  
Requires memorization of scientific names.  
Practices identification in the classroom and in the ocean for field research purposes.  
This course does not fulfill Natural Science core requirements.  
This course does fulfill requirements for acceptance into Quantitative Underwater Ecological Surveying Techniques (QUEST).  
3cr., 3hr. lect./lab

101  **Intro to Marine Option Program**  
Explores the University of Hawai‘i systemwide Marine Option Program through HITS interactive television, discussions, and field trips.  
This course does not fulfill Natural Science core requirements.  
1cr., 1hr. lect.

140  **Open Water SCUBA Certification**  
Covers the full spectrum of diving activities.  
Discusses equipment and its maintenance, dive physiology and physics, safety procedures, dive planning, dive tables, and environmental conditions.  
Teaches skills for safe diving by means of classroom lectures and open-water sessions, including seven ocean dives.  
Students successfully completing the course receive an Open Water Certification card from an internationally recognized SCUBA training organization.  
Total cost of $145 includes equipment rental, textbook, workbook, diving logbook and tables, and certification.  
(Credit/No-Credit only.)  
2cr., 48hr. per semester

191v  **Field Experience in Marine Naturalist Training**  
Prereq: Enrollment in Certificate of Competence Marine Naturalist I or II program or Marine Option Program, or consent.  
Provides internship experiences in marine-related agencies and businesses.  
This course does not fulfill Natural Science core requirements.  
(May be repeated for a maximum of 9 credits.)  
1-3cr., 1-3hr. lect./lab

201  **Science of the Sea**  
Prereq: ENG 22 or 55 with grade C or better or placement at ENG 100, and MATH 1 with grade C or better or placement at least MATH 22; or consent.  
Introduces basic concepts of geological, physical, chemical, and biological oceanography.  
Emphasizes relationships between land-based and marine-based sciences.  
3cr., 3hr. lect.  

201L  **Science of the Sea Laboratory**  
Prereq: OCN 201 with grade C or better (or concurrent); and at least MATH 23 with grade C or better, or placement at MATH 25 or at least MATH 100; or consent.  
Introduces instrumentation and methods used in oceanographic observations and research.  
Demonstrates oceanographic principles through laboratory and field data collection and analysis.  
1cr., 3hr. lab.  

293v  **Ocean Internships & Research**  
Prereq: Enrolled in Marine Option Program, Prereq or coreq: OCN 201 and ZOOL 200.  
With faculty guidance, students design and carry out marine-related internships, practica, research projects, or field experiences on or off campus.  
This course does not fulfill Natural Science core requirements.  
(May be repeated for a maximum of 9 credits.)  
1-3cr.
Pharmacology (PHRM)

103 Introduction to Pharmacology
Prereq: BIOL 100 with grade C or better, or consent. Recommended: NURS 16 with grade C or better.
Surveys scope of pharmacology including drug standards, classifications, common drugs within each classifications, drugs commonly used in the prevention, diagnosis, and treatment of disease, legislation of drugs, and administration of drugs. 1cr., 3hr. lect. for 5 wks.

104 Pharmacological Treatment of Disease
Prereq: PHRM 103 with grade C or better, or consent. Recommended: NURS 16 with grade C or better.
Explains medications commonly used in the prevention, diagnosis, and treatment of diseases. Discusses pharmacological actions, side effects, and related responsibilities. (Letter grade only.) 1cr., 3hr. lect. for 5 wks.

105 Administration of Medications
Prereq: PHRM 104 and NURS 16 both with grade C or better; or consent.
Applies basic concepts required for medication administration as a delegated task in community-based settings such as assisted living, day care, or care homes. Demonstrates choice of equipment, proper technique, hazards, complications, and patient care. Administer subcutaneous, intradermal injections, preparation and administration of oral medications, and immunizations. (Letter grade only.) 1cr., 6hr. lect./lab for 5 wks.

106 Introduction to Pharmacy Technology
Prereq: BIOL 100, and BUSN 189 or MATH 22 or higher; or consent.
Introduces students to the role and responsibilities of the pharmacy technician in the current health care environment. Describes basic pharmacy functions in retail, institutional, home health, and ambulatory care settings. (Letter grade only.) 3cr., 3hr. lect.

203 General Pharmacology
Prereq: ZOOL 141, or BIOL 141 (Hau-CC), or BIOL 243 (UH-Hilo), or ZOOL 240 (LCC), or consent.
Discusses drugs with emphasis on sites and mechanism of action, toxicity, fate, and uses of major therapeutic agents. 3cr., 3hr. lect.

Philosophy (PHIL)

100 Introduction to Philosophy: Survey of Problems
Introduces the great philosophical issues, theories, and controversies. 3cr., 3hr. lect. (IN)

101 Introduction to Philosophy: Morals & Society
Recommended: PHIL 100.
Introduces issues of social and individual values, obligations, rights, and responsibilities. 3cr., 3hr. lect. (CO)

102 Introduction to Philosophy: Asian Traditions
Prereq: ENG 22 or 55 with grade C or better, or placement at ENG 100, or consent.
Explores universal philosophical themes and problems from the Asian perspective. Focuses on Indian, Chinese, and Japanese traditions. 3cr., 3hr. lect. (CO, AP)

109 Reasoning and Critical Thinking
Recommended: ENG 100 and ENG 210 or 102.
Studies informal logic, practical reasoning, argument, and the use and misuse of language. Emphasizes the development of critical thinking skills. 3cr., 3hr. lect. (CO, IN)

110 Introduction to Logic
Prereq: ENG 100 with grade C or better, or consent.
Develops the basic technique of logical analysis. Emphasizes symbolic logic, truth, validity, formal and informal fallacies. Examines inductive and deductive reasoning, and the criteria of evidence for reliable beliefs. Students who seek to apply PHIL 110 to fulfill the AA (and appropriate AS and AAS) degree requirements in Quantitative Reasoning must place into MATH 100 or higher. 3cr., 3hr. lect. (FS)

301 Ethical Theory
Prereq: ENG 100 and ENG 210 or 316 or PHIL 100, 101, 102, 110, both with grade C or better, or consent.
Investigates problems and methods in theory of moral conduct and decision-making. Discusses primary source materials, meta-ethics, and normative theories as well as applied ethics. 3cr., 3hr. lect. (CO, IN)

323 Professional Ethics
Prereq: ENG 100, or consent.
Examines major ethical theories and principles relevant to decision-making in professional situations. Includes experiential and self-reflective methodologies as well as theoretical perspectives. 3cr., 3hr. lect.

Physics (PHYS)

50 Technical Physics
Prereq: Placement at least MATH 50.
Introduces principles of mechanics and properties of matter, heat, sound, electricity, magnetism, and light. Also introduces methods of measurement using both mechanical and electrical instruments. Emphasizes practical applications of physical principles. 3cr., 3hr. lect./disc./demonstration

105 Principles of Technology
Prereq: MATH 25 with grade C or better, or placement at least MATH 103 or 107, or consent.
Introduces fundamental theories and problem solving methods in physics as they relate to technology and its applications. Introduces experimental methods in physics and applications of modern technology to experimental science. (Letter grade only.) 4cr., 3hr. lect./3hr. lab

151 College Physics I
Prereq: MATH 140 or placement at least MATH 205.
Introduces fundamental theories and problem solving methods in mechanics, heat, and sound. Emphasizes applications of physical principles. Introduces experimental methods in mechanics, heat, and sound. 4cr., 3hr. lect./3hr. lab (EA, EL, FN)
152 College Physics II
Prereq: PHYS 151.
4cr., 3hr. lect./3hr. lab (EA, EL, FN)

170 General Physics I
Prereq: MATH 205 (or concurrent).
Presents fundamental principles in classical mechanics, thermodynamics and wave motion. Emphasizes the mathematical techniques used in the explanation of physical phenomena. Introduces experimental methods in mechanics, heat, and sound with the emphasis on error analysis, measurement techniques, and report writing. For students majoring in the physical sciences, engineering, or mathematics. 5cr., 4hr. lect./3hr. lab (EA, EL, FN)

272 General Physics II
Prereq: PHYS 170 with grade C or better, and MATH 206 (or concurrent).
Presents fundamental principles in electricity, magnetism, and geometrical optics. Introduces experimental methods in electricity, magnetism, electronics, and optics with emphasis on error analysis, measurement techniques, and report writing. For students majoring in the physical sciences, engineering, or mathematics. 4cr., 3hr. lect./3hr. lab (EA, EL, FN)

Political Science (POL)
D. Haytko-Paoa

110 Introduction to Political Science
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Studies political institutions, systems, behavior, and issues. Analyzes American national government. Includes study of presidency, interest groups, elections, and the American political system. 3cr., 3hr. lect. (CO, CG)

120 Introduction to World Politics
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Studies current topics in international politics. Analyzes foreign policy of the United States. 3cr., 3hr. lect. (CO, CG)

180 Introduction to Hawaiian Politics
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Studies contemporary Hawaiian political institutions, processes, issues, and personalities at the State and County levels. Emphasizes citizen roles and responsibilities in local politics. 3cr., 3hr. lect. (CO, HI)

Psychology (PSY)
BK Griesemer, L. Yankowski

100 Survey of Psychology
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Surveys the major areas in the field of psychology. Analyzes the five major perspectives in the field and how these perspectives apply to human behavior. Studies memory, learning, personality, therapy, and abnormal behavior. 3cr., 3hr. lect. (CO, CG)

103 Introduction to Psychological Writing and Research Skills
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Introduces students to the APA writing style and format for writing term papers and conducting research in psychology. Prepares students with the skills necessary to learn and write about basic and complex psychological concepts. 2cr., 2hr. lect.

170 Psychology of Adjustment
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Examines current psychological research in the field of adjustment and provides various coping mechanisms in dealing with life’s problems. Stresses personal as well as societal concerns. Studies stress, love, marriage, divorce, suicide, death and dying, and psychological therapies. 3cr., 3hr. lect. (IN)

171 Social Psychology
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Examines the principles of social psychology and covers the topics of attitudes and attitude change; prejudice and discrimination; social perception, attribution, attraction, and liking; prosocial behavior and altruism; aggression and violence; compliance and obedience; group structure and dynamics; environmental and urban influences. 3cr., 3hr. lect. (CO, CG)

213 Statistical Techniques
Prereq: PSY 100 and MATH 100 or 115 both with grade C or better; or consent.
Examines descriptive statistics, z-tests, t-tests, F tests, chi-square tests, and correlation analyses. Examines statistical analysis of variance (ANOVA). Denotes uses and abuses of statistics. 4cr., 3hr. lect./3hr. lab (FN)

214 Research Methods
Prereq: PSY 213 with grade C or better, or consent. Recommended: PSY 103 with grade C or better.
Surveys knowledge needed in reading, developing, and interpreting psychological research. Examines ethical issues in research, writing in APA style, and the scientific method using multiple research designs. 4cr., 3hr. lect./3hr. lab

240 Developmental Psychology
Prereq: PSY 100 with grade C or better, or consent. Recommended: At least ENG 100 with a C.
Examines the principle features of each life stage from prenatal through aging and death. Considers emotional, cognitive, physical, and social development at each stage. 3cr., 3hr. lect. (IN)

250 Social Psychology
Prereq: PSY 100, or consent.
Introduces methods of research in social psychology and covers the topics of attitudes and attitude change; prejudice and discrimination; social perception, attribution, attraction, and liking; prosocial behavior and altruism; aggression and violence; compliance and obedience; group structure and dynamics; environmental and urban influences. 3cr., 3hr. lect. (CO, CG)
251 Human Sexuality
Prereq: PSY 100, or consent.
Examines topic areas in the field of human sexuality including anatomy/physiology, sexual response, and sexual themes in society. Emphasizes understanding of one's sexuality through decision-making and communication skills. 3cr., 3hr. lect. (IN)

253 Conflict Resolution & Mediation
Prereq: PSY 100 or BUS/COM 130 or COM 145 any with grade C or better, or consent. Recommended: ENG 100 with grade C or better.
Explores the reasons for conflict and the different approaches for seeking resolution for conflict. Studies personal and societal value systems, the psychology of how people respond to conflict, the impact of culture on conflict styles, communication skills useful in dealing with conflict, and alternative resolution strategies. Practices mediation skills as a third party intervention method. (Crosslisted as COM 215.) 3cr., 3hr. lect. (CO)

260 Psychology of Personality
Prereq: PSY 100, or consent.
Studies major personality theories in the field of psychology. Compares and contrasts each theory based on specific criteria. Examines how personality could be understood within a cultural-social environment. 3cr., 3hr. lect. (IN)

353 Conflict Management & Resolution
Prereq: Either PSY 100 or SOC 100 with grade C or better, and one of (with grade C or better): BUS/COM 130, COM 145, COM 210, or PSY 253/COM 215; or consent.
Examines human communication in relational conflict. Analyzes the relationships among personal history, culture, gender, power, and communication. Applies practices of Alternative Dispute Resolution (ADR) processes in assessing and intervening in conflict situations using mediation and negotiation techniques in both personal and professional contexts. Includes Western, Eastern, and Hawaiian approaches to conflict management and resolution. (Crosslisted as COM 353) 3cr., 3hr. lect.

121 Introduction to Science: Biological Science
Prereq: ENG 22 with grade C or better, or placement at ENG 100.
Introduces characteristics of science, historical development of scientific concepts, and interactions of society with science, illustrated by topics from biological sciences. (Crosslisted as BIOL 101.) 4cr., 3hr. lect./3hr. lab (EA, EG, EL)

135 Informal Reasoning
Studies informal logic, fallacious reasoning, argument construction, and the use and misuse of language. Emphasizes development of critical thinking skills useful in reasoning about everyday political and social issues. 3cr., 3hr. lect.

218 Introduction to Social Problems
Prereq: ENG 22 with grade C or better, or placement at ENG 100, or consent.
Discusses and analyzes a number of modern social problems. Evaluates proposed solutions to problems. 3cr., 3hr. lect. (CO)

231 Introduction to Juvenile Delinquency
Studies principles and procedures of arrest, detention, petition, summons, records, and adjudication of juvenile offenders. Introduces organization and function of the police juvenile unit, community diversion practices, and organization of the Family Court. Reviews Hawai'i statutes and United States Supreme Court decisions affecting juvenile rights of due process. Considers societal context of juvenile problems, delinquency prevention, and treatment. (Crosslisted as AF 210.) 3cr., 3hr. lect. (CO)
251 Introduction to Sociology of the Family
Analyzes family patterns, mate selection, parent-child interaction, socialization of roles, functions, family trends, and a cross-cultural look at the contemporary family. 3cr., 3hr. lect.  (CO, CG)

Spanish (SPAN)

M. Fleming

101 Elementary Spanish I
Introduces speaking, listening, reading, and writing skills of basic Spanish.  Includes basic sentence structures.  Designed for students with little or no Spanish background.  4cr., 4hr. lect.

102 Elementary Spanish II
Prereq: SPAN 101, or consent.
Continues SPAN 101.  Introduces additional verb tenses and continues to expand Spanish speaking, listening, reading, and writing.  4cr., 4hr. lect.

201 Intermediate Spanish I
Prereq: SPAN 102, or consent.
Second level course in Spanish listening, speaking, and writing.  Introduces more advanced patterns and vocabulary words.  3cr., 3hr. lect./disc.

202 Intermediate Spanish II
Prereq: SPAN 201, or consent.
Continues SPAN 201.  Completes introduction of major grammatical patterns of standard Spanish in reading, listening, writing, and speaking.  Continues to explore different literary forms.  3cr., 3hr. lect.

272 Hispanic Culture
Prereq: SPAN 201 with grade C or better, or consent.
Acquaints students with a variety of Hispanic countries and their culture, using film, short story, poetry, CD-ROM, and guest speakers.  Uses previously acquired Spanish language skills to explore and appreciate Hispanic culture.  Taught in Spanish and English.  3cr., 3hr. lect.  (CO)

Speech (SP)

R. St. John, C. Thompson

151 Personal & Public Speech
Recommended: Placement at ENG 100.
Introduces the major elements of speech.  Develops competence in two-person, small group, and public speaking situations.  3cr., 3hr. lect./disc.  (FO, HE)

231 Interpretive Reading
Develops competence in the art and skill of reading literature aloud.  3cr., 3hr. lect./disc.  (FO, HE)

251 Principles of Effective Public Speaking
Prereq: ENG 22 with grade C or better, or placement at ENG 100 or consent.
Recommended: ENG 100.
Develops speech composition and delivery skills by providing extensive practice in preparing and presenting effective public speeches.  Emphasizes critical thinking, clear reasoning, appropriate support, organization, outlining, audience analysis, and lively delivery skills.  3cr., 3hr. lect./disc.  (FO, HE)

Telecommunications (TCOM)

M. Albert

261 Introduction to Studio Production
Recommended: ENG 22 or 55 with grade C or better, or placement at ENG 100 or consent.
Introduces the student to the world of TV studio production.  Designed to give a working knowledge of video as it is utilized in broadcasting, cable operations, corporations, education, and independent production.  Emphasizes video as a profession, video communications, and the proper use and understanding of studio equipment.  3cr., 1hr. lect./5hr. lab

Topics & Issues
90v, 190v, 290v, 390v, 490v.  See section on Special Curricula on page 52 for details.
Note: For 190v courses in the Humanities, up to three credits of different topics may be used as general electives in the AA, AS, and AAS degrees; up to three additional credits may be used to satisfy a Humanities requirement, for a total of no more than six Topics credits.

Welding (WELD)

19B Introduction to Welding for Trades
Coreq: WELD 19C or WELD 19D.
Introduces theory and practice of arc welding of ferrous metals.  Includes procedures in flat, horizontal, and overhead work.  Treats brazing, flame cutting, welding of aluminum, stainless steel, and other metals.  Designed as a support course for trades.  1cr., 2hr. lect./lab

19C Welding for Automotive Applications
Prereq: WELD 19B.
Introduces theory and practice of arc welding of ferrous metals dealing with automotive applications.  Includes procedures in flat, horizontal, and overhead work.  Designed as a support course for trades.  1cr., 2hr. lect./lab

19D Welding for Construction Applications
Prereq: WELD 19B.
Introduces theory and practice of arc welding of ferrous metals dealing with building construction applications.  Includes procedures in flat, horizontal, and overhead work.  Designed as a support course for trades.  1cr., 2hr. lect./lab

22B Hand & Power Tools
Involves safe use and care of hand and power tools in practical shop applications.  2cr., 4hr. lect./lab

22C Oxyfuel Welding, Cutting, Brazing
Prereq: WELD 22B, or consent.
Develops skills in oxyfuel welding, cutting and brazing of ferrous metals.  Includes safe handling procedures of related tools and equipment.  2cr., 4hr. lect./lab

22D Arc Welding I
Prereq: WELD 22C, or consent.
Introduces the theory of Shielded Metal Arc Welding (SMAW) of ferrous metals in the flat and horizontal positions.  Develops practical skills in SMAW techniques and emphasizes safe equipment operation procedures.  2cr., 4hr. lect./lab
22E  Arc Welding II  
Prereq:  WELD 22D, or consent.  
Introduces theory of Shielded Metal Arc Welding (SMAW) of ferrous metals in the vertical and overhead positions.  
Develops practical skill in SMAW techniques and emphasizes safe equipment operation procedures.  2cr., 4hr. lect./lab

22F  Structural Steel & Metallurgy  
Prereq:  WELD 22E, or consent.  
Introduces structural steel shapes and properties of various metals.  
2cr., 4hr. lect./lab

32B  Introduction to MIG Welding  
Prereq:  WELD 22F, or consent.  
Introduces theory of Metal Inert Gas (MIG) welding of ferrous metals.  
Develops practical skills in MIG welding techniques and emphasizes safe equipment operating procedures.  2cr., 4hr. lect./lab

32C  Introduction to TIG Welding  
Prereq:  WELD 32B, or consent.  
Introduces theory of Tungsten Inert Gas (TIG) welding of ferrous and non-ferrous metals.  
Develops practical skills in TIG welding techniques and emphasizes safe equipment operating procedures.  2cr., 4hr. lect./lab

32D  Arc Welding III  
Prereq:  WELD 32C, or consent.  
Introduces advanced techniques of Shielded Metal Arc Welding and includes “destructive” testing procedures.  2cr., 4hr. lect./lab

32E  Fabrication Practicum I  
Prereq:  WELD 32D, or consent.  
Introduces sketching, additional techniques of welding, cutting and fabrication that apply to shop and field applications.  2cr., 4hr. lect./lab

32F  Fabrication Practicum II  
Prereq:  WELD 32E and BLPR 30, or consent.  
Involves work practicum with students in “live” practical shop applications.  2cr., 4hr. lect./lab

200  Marine Biology  
Prereq:  ENG 22 with grade C or better, or placement at ENG 100, or consent.  
Surveys physical and biological characteristics of the marine environment.  
Discusses local marine flora and fauna.  
Surveys topics including fisheries, aquaculture, pollution, and marine resources.  4cr., 3hr. lect./3hr. lab (EA, EL, EG)

Work Practicum (WP)  
WP 151v.  See section on Special Curricula on page 52 for details.

Zoology (ZOOL)  
B. Butler, S. Calder, A. Coopersmith, C. Hornick

101  Principles of Zoology  
Prereq:  ENG 22 or 55 with grade C or better or placement at ENG 100, or consent.  
Surveys major animal groups with emphasis on structure, physiology, development, reproduction, evolution, ecology, behavior, and interactions with humans.  
(Crosslisted as BIOL 103.)  
4cr., 3hr. lect./3hr. lab (EA, EL, EG)

141  Human Anatomy & Physiology I  
Prereq:  BIO 100 or ZOOL 101 or BIOC 241 or BIOL 101 or SCI 121 or high school biology any with grade B or better, and ENG 22 or 55 with grade C or better or placement at ENG 100, or consent.  
Covers anatomy, physiology, and biochemistry of humans including terminology, cell structure, tissues, skin, and the skeletal, muscular, and nervous systems.  
4cr., 3hr. lect./3hr. lab (IN)

142  Human Anatomy & Physiology II  
Prereq:  ZOOL 141, or consent.  
Covers anatomy, physiology, and biochemistry of humans including metabolism, genetics, and the cardiovascular, respiratory, digestive, excretory, endocrine, and reproductive systems.  
4cr., 3hr. lect./3hr. lab (IN)